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CASE STUDIES OF CHILD PLAY AREAS AND CHILD SUPPORT FACILITIES.(U)

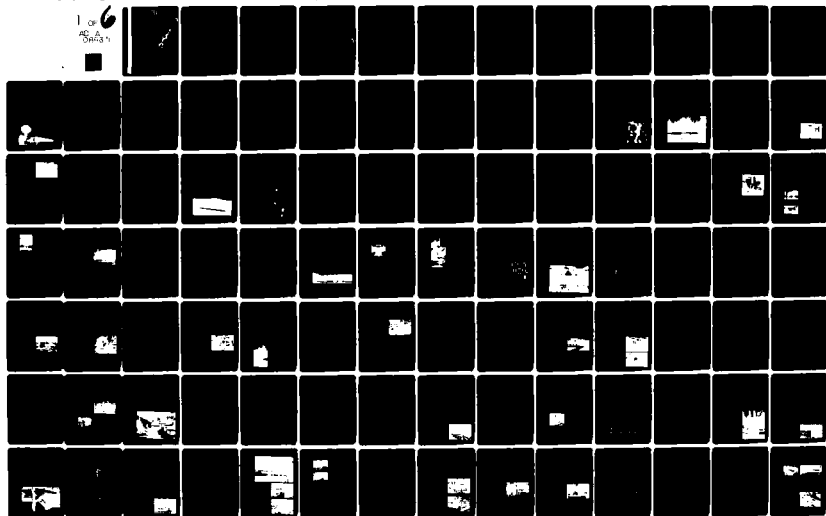
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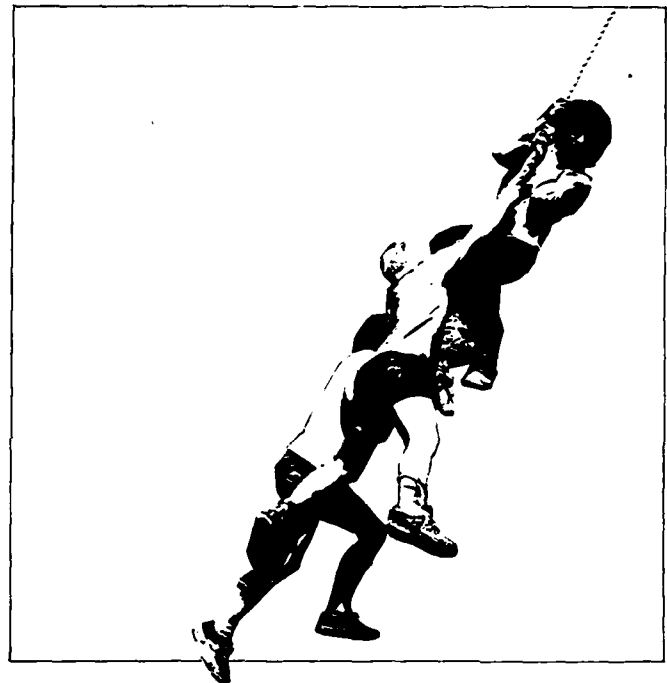
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CASE STUDIES OF
CHILD PLAY AREAS AND
CHILD SUPPORT FACILITIES

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Uriel Cohen, Tim McGinty, Gary T. Moore

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CASE STUDIES OF
CHILD PLAY AREAS AND
CHILD SUPPORT FACILITIES

TRAVEL AND FIELD RESEARCH REPORT

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PREFACE

This report is a joint product of the Community Design Center, Inc. and the Center for Architecture and Urban Planning Research, University of Wisconsin-Milwaukee. It was prepared by the Co-Principal Investigators at UWM, Professors Uriel Cohen and Gary T. Moore, and the Project Manager at CDC, Mr. Tim McGinty.

The work was conducted from late June through August, 1978 in completion of Task II, Travel and Research, of Contract No. DACA73-78-C-0005 between the U.S. Department of the Army, Office of the Chief of Engineers and CDC, Inc. with its subcontractor, UWM.

The site visits were conducted by Messrs. McGinty, Cohen, Moore, and Mr. Frederick Jules of UWM, who were joined for portions of the trip by Messrs. William E. Johnson and Murray Geyer of the Office of the Chief of Engineers, and at two military facilities by Ms. Marla Bush of the Community Services Branch, Office of the Adjutant General.

Various other people have contributed to the completion of this report. All site and building plans were drawn by Mr. Jules, in many cases from rough field sketches. Photo processing was done by Mary Keeler of the UWM School of Architecture and Urban Planning Photo Laboratory and by Educational Communication Services. Typing was done by Mss. Susan Meier, Kathy Goff, and Carol Lane. Final graphic production was done by Mr. Donald Gatzke, with assistance from Ms. Ann Hill, all of the UWM Project Team.

Many people shared their time and offered insights about children's environments: the child care, family housing, and master planning staffs, parents and children of the 7 military bases visited; the child care and playground staffs, designers and children at the 35 civilian facilities visited; and additional experts and interested people around the country.

SYNOPSIS

PURPOSE

This report describes and evaluates 50 facilities and settings for play, child care, and early childhood development. The evaluation is part of a long-range project for the U.S. Army Corps of Engineers to specify new guidelines for the design of child care facilities and play areas at military establishments around the country.

Problem

This research-travel report was done in response to two problems affecting the hundreds of thousands of children at military bases. First, the U.S. Army maintains the largest number of employer-sponsored child care centers in the country (close to 200). Nevertheless, as a microcosm of the rest of the country, demand for developmentally-oriented quality care, both full-day and drop-in, including infant care, far exceeds current supply. Second, outdoor playgrounds and natural play areas for the children of young enlisted and officer families are seriously lacking in most family housing areas.

These problems must be seen against the dual backdrop that the early preschool years are the time of most rapid development, and that early childhood development happens everywhere--certainly not just in school--but also in early childhood centers and through spontaneous outdoor play.

To help rectify these problems, the Dept. of the Army has plans to build a number of new child care facilities, to renovate others, and to introduce new play areas for children in family housing, recreation, and town center locations.

Objectives

The objectives of the research were:

- to sensitize the client organization to the role of the physical environment in child play, care, and early development,

2. • to comparatively document and assess a sample of both military and civilian care facilities and play areas, *etc.*
3. • to identify key design features and physical patterns which facilitate child development.

RESEARCH PROCEDURE

Research site visits were made at 35 civilian and 7 military locations. A total of 50 were studied. The settings were selected to sample regional and climatic variations, new and renovated facilities, specially designed and self-help projects, different facility sizes and budgets, and some award-winning facilities.

Specific methods included:

- architectural inventories of the surrounding context, immediate site, the building or play area, building subsystems, and furnishings
- behavioral observations of the spatial behavior of children and staff in the facility and its major behavior settings
- focused interviews with the facility director, typical staff, and in some cases children, parents, the base master planner or the chief designer of the facility
- interviews with selected national experts

All interviews were tape recorded and notes were taken. Observations were recorded through behavioral mapping, sketches, and photographs. (For details of the research methods, see the Appendix--Research Forms.) A total of 55 person-days were spent on observations and interviews. The data was then analyzed and distilled into mini-reports.

ORGANIZATION OF THE DOCUMENT

The case studies are in two parts: children's play areas, and child care facilities. Each major case study includes:

- basic architectural and user data
- program philosophy
- facility description, conceptual organization, and building subsystems
- results of user observations and interviews

- assessment, including, as appropriate, special strengths and weaknesses of the facility in the light of child development goals, and lessons for other facilities of the same type

The shorter case studies include only basic data, facility description, and brief assessment.

Important issues and conclusions arising from the case studies are summarized at the end of the two major parts of this document.

DISSEMINATION

The findings of this research will be disseminated to Corps of Engineers' personnel, military master planners, facility engineers, family housing officers, and child care directors and staff across the country.

SIGNIFICANCE

This report is an example of applied architectural research done for an institutional client under professional time constraints. Designed to inform the client about design issues, design decisions to be made, and successful design features for child development it is also a prototype document which brings together and makes accessible large amounts of architectural and behavioral information. It is the product of a joint government/professional/university effort to conduct evaluative case studies of a range of existing facilities in order to influence better design.

The main points of significance are:

- in-depth behavioral evaluation and criticism of a range of children's facilities relative to child development goals
- adaptation of environment-behavior research methods for use in a professional context
- identification of patterns of physical features to be avoided and others to be repeated in subsequent designs
- production of a prototype document for on-site research which can be done for other building types.
- bringing together information from architectural and behavioral points of view, and making it readily available to national decision makers, clients, architects, and program directors

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INTRODUCTION



PURPOSE AND OUTLINE OF DOCUMENT

PURPOSE

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METHODS USED FOR SITE VISITS

As in most applied-research procedures, there are at least seven phases:

- decisions on questions to be addressed
- selection of appropriate sites
- selection of research methods
- decisions on samples of people
- pretesting research instruments
- on-site procedure
- data analysis

QUESTIONS

The basic questions addressed were:

- What are the program goals and overall operating philosophy of child care directors and playground master planners?
- What population of children are being provided for, in terms of age, socioeconomic backgrounds, and significant handicaps, and what future demand is expected?
- What are staff attitudes and preferences about different site locations, building configurations, systems, and furnishings?
- How do children use current space, what spatial characteristics seem most to facilitate development, and what are children's attitudes, preferences, and experiences with different design features?
- How do children feel about different types of child care facilities and play areas, including new design ideas they have never directly experienced?

- Where do children on bases spend their free time, what is there for them to do, and what needs do they have which presently are not being met?
- What parental attitudes might influence the location and design of child-care facilities and play areas?
- What are the official base and staff policies regarding child-care and play, their programs, location and style of setting?

SITE SELECTION

The selection of sites was guided by particular objectives, all intended to insure breadth of the study:

- balance between play and child-care
- geographic diversity
- climatic diversity
- low and high budget facilities
- large and small facilities
- specially designed and self-help projects
- new construction and renovation
- places known for their programs and staff and places known for their facility
- a number of military sites of all three branches
- a sample of some of the reputedly best civilian facilities--including several national award winners--the objective here being to insure that the design and construction of new military facilities and settings will be influenced by the best of current children's architecture

Particular sites meeting these criteria were chosen from our general knowledge, intensive review of the world architectural press back to 1965, and by recommendation from other national experts.

In all, 5 Army bases and 1 each of Navy and Air Force bases, each with child-care and play settings to assess, were specified by the Special Projects Branch in consultation with the Office of the Adjutant General Community Services Branch and the Master Planning Branch. An additional 10 primary play areas and 7 primary child-care facilities were selected by the Project Team. Additional settings were added on the primary route, and a few other interviews were conducted with national experts. In all, 7 military and 20 civilian play areas, and 8 military and 15 civilian child-care facilities were visited and 6 additional interviews were conducted.

RESEARCH METHODS

To answer the questions of interest, certain existing environment-behavior research methods were adopted. In particular, the research team developed three main methods (see the Appendix for the complete instruments):

- Facility inventory, including space for plans and sketches and a check list for noting and photographing significant architectural features.
- Behavioral observation of children and staff in child-care facilities, designated playgrounds, and undesignated play spaces, including copies of maps and plans for sketches, and photographs to be taken.
- Focused interviews with children, parents, program director or play leader, other typical staff, base master planner, family housing officer, and architect where appropriate, including questions about program philosophy, age groups served, program activities, satisfaction and preferences, recommendations for new design criteria, best current children's places, etc., and including a simulation game where children looked at photographs of different types of children's settings, described what they might do there, put them in preferred order, and then gave reasons for their preferences.

SUMMARY OF RESEARCH METHODS (TYPICAL PATTERN)

Method	Sample: Military	Civilian	Time	Recording	Analysis
1. Facility Inventory	7 play 8 child care	19 play 13 child care	1-2 hrs.	plans sketches notes	
2. Observation of Spatial Behavior	children and staff facility and base	children and staff facility only	1-3 hrs.	sketches notes photos	content analysis
3. Focused Interview	3.1 children 3.2 parents 3.3 child care director other staff 3.4 master planner family housing officer	3.1 children 3.3 child care director play leader other staff 3.4 architect	1-3 hrs.	tapes notes brochures hand-outs	content analysis

SAMPLE

Each significantly different behavior setting was observed for 30 minutes, including at least one infant, preschool, and after-school setting. In some of the larger facilities, however, time did not allow for this degree of thoroughness.

Interviews were conducted, where possible, with the program director, a typical staff member, two groups of 4-5 children of different ages and socio-economic backgrounds, two groups of parents, one of preschool children and one of school-age pre-adolescents, and a minimum of one planning administrator (base master planner, facilities engineer, family housing manager, and/or architect). Unfortunately at some bases we were not able to interview parents, and at one base even the children were missing.

Over 80 hours of interviews were conducted with staff, children, parents, and planners. Systematic, detailed behavioral observations were made and recorded at all 17 primary play areas and 15 primary child-care facilities. Over 1200 color slides and about 1000 black-and-white photos were taken. Finally, site and building plans were drawn for settings not having published plans.

PRETESTING RESEARCH INSTRUMENTS

Prior to the site visits, all research forms were pretested thanks to the cooperation of the University of Wisconsin-Milwaukee Day Care Center. The forms were reviewed in Washington, and necessary changes were made. In addition, a briefing book was compiled for each team culled from published accounts of the sites to be visited together with forms for recording address, names of contact people, basic architectural data, and complete references to any published account of the facility in the past 10 years.

Itineraries were drawn up, appointments made, and letters of reminder were sent to the program director at the primary research sites (see Appendix).

PROCEDURE

The overall procedure at a site was for the research team to meet with the program director to explain the nature of the project and obtain her or his signed approval to work with the children, take photographs, etc., and then to begin the research.

The two teams (West and East Coast) were comprised of one architectural researcher and one designer; both teams were also joined by OCE representatives.

One member of the team (the designer) conducted the architectural inventory following prepared forms, while the other member (the researcher), usually accompanied by the OCE representative, interviewed the director and took a brief tour of the facility. All interviews were tape recorded and notes were taken. The team then observed different spaces following the behavioral observation forms, and, after noting repeating and interesting patterns of environment-behavior interactions, recorded examples on both color and black-and-white film and in sketches and notes. As the day continued, a typical pattern was for the designer to do additional behavioral observations and recording, and some interviews with the children, while the researcher was conducting additional interviews with staff, parents if available, and children. At the end of the day, the team would reassemble and take a tour of the base or neighborhood area in search of "kid tracks", "remnants of use", and other indications of where children play and otherwise spend their time, and where they might if correct planning, siting, and design decisions were made.

DATA ANALYSIS

Due to the non-quantifiable nature of the data, it was content analyzed informally, and results from particular sites were compared to identify more general patterns, issues for decision, and recommendations.

CHILDREN'S PLAY AREAS



FORT BRAGG ARMY BASE FAMILY HOUSING PLAY AREAS

BASIC DATA

Client	United States Army
Address	Fort Bragg, North Carolina 28307
Date	In progress
Users	Children of surrounding family housing
Size	"Self-help" playgrounds between 400-1,000 sq. ft.; "turnkey" playgrounds c. 2,000 sq. ft.
Cost	Self-help, c. \$3,800 ea. for equipment only; "turnkey", not available
People	Col. Tabb, Head of the Self-Help Program Interviewed Mr. Cameron, Housing Manager



PROGRAM DESCRIPTION

The play areas among family housing are primarily the result of two programs: self-help and "turnkey."

Self-Help Program

In this program, an official from Community Services finds out if neighbors would like a playground. If they do, then there are meetings to select equipment and confirm a site. The self-help part is the agreement to assemble and install the equipment, with the capital cost being picked up as a base expense. On occasion the neighborhood group chooses to add things like sandboxes, jumping tires, or special home-made climbing or swinging equipment.

"Turnkey" Program

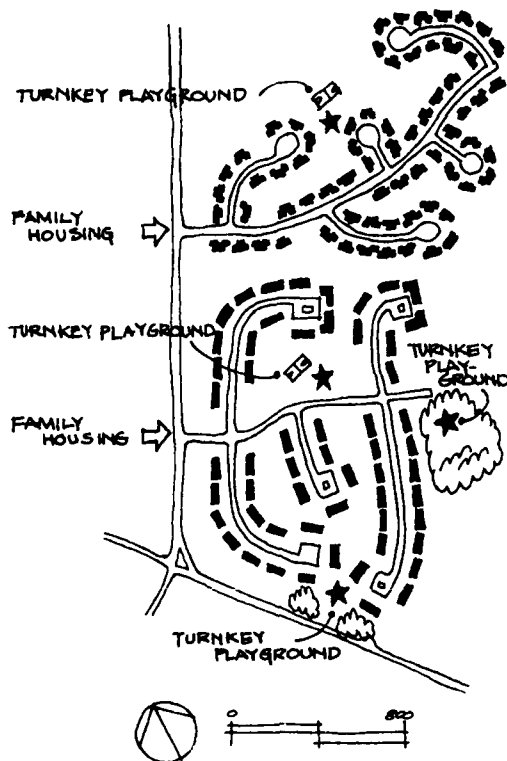
The playgrounds in the newest housing areas are part of the "turnkey" package of housing units and site development that contractors are required to include in their housing area proposals. Contractors with playgrounds and other amenities receive some preference when their proposals are being reviewed.

FACILITY DESCRIPTION

Four "Turnkey" Playgrounds

The "turnkey" playgrounds are sited in the network of open space between or at the backs of the housing units in a land use plan that resembles some aspects of Radburn town planning. The play areas are accessible to most users without crossing a street. Two of the four facilities are adjacent to paved play areas as part of the "turnkey" offering. Several additional housing areas have similar playgrounds and basically the same equipment:

- swing set for preschoolers
- youth swing set (6-16)



- slide
- merry-go-round
- climber
- enclosing curb
- sand surface

Four Self-Help Playgrounds

A data sheet on the self-help playground program at Fort Bragg listed 74 pieces of equipment totaling \$31,800 (about \$440 each). Four types of equipment were ordered:

- swing for preschoolers
- youth swing set (6-16)
- slide
- climber

Eleven housing areas had been invited to participate; eight choose to. Two typical installations are shown. The second shows the addition of tires as a special effort on the part of the community group and the Community Life Program's representative.





OBSERVATIONS AND INTERVIEWS

COMMENTS FROM INTERVIEWS

Two people from the based joined the team on our inspections of the play sites; Colonel Tabb, Head of the Self-Help Program and Mr. Cameron, Manager of Base Housing. They had the following comments to offer about play and play area design on Army bases.

- difficult to forecast long-range play needs because programs will fluctuate based on the needs of the community and their priorities
- some funds come from community maintenance for construction of new facilities
- Fort Bragg has a shortage of playgrounds; the self-help program has spent \$31,800 for eight areas which represents about half the current need
- self-help facilities appear to be used more than other base playgrounds
- the base goal is to provide one play area for each 50 families
- a half-court basketball court should be a part of at least some of the self-help playgrounds; but its location should be away from houses especially if there is night lighting

- each housing area should have its own tennis court
- all play equipment comes from the G.S.A. catalogue
- Army bases are slightly different from civilian settings in that parents are directly accountable for their children's behavior, for example, children aren't allowed to stay alone in a house, a car, or an apartment
- the "turnkey" playgrounds all have a drainage problem; the concrete curb around the edge holds in both sand and rainwater and there are big puddles in them after every rainstorm
- rules prohibit changing the "turnkey" projects for three years, so they haven't tried to repair or enlarge them, or involve them in the self-help program

ASSESSMENT

"Turnkey" Playgrounds

The success of the "turnkey" project is the incentive it provides to the proposal maker to include play areas and play spaces in their proposals. Unfortunately, the play areas included appear to be simple combinations of catalog equipment that only emphasize large-muscle play. Those play areas that also include hard-surfaced play are an improvement although the location of those areas is more difficult because of the noise they create. In fact, there were complaints about the basketball area at one site because it was sited very close to the backyards of several housing units. Ironically, it would have been very easy on that site to locate the field much further away from the housing without getting dangerously close to a street if the site planner had made the isolation of basketball noise as a consideration.

Research done by several others, however--to be reported in the Criteria Document--points out that children, especially pre-teenagers, will not use ballgame areas if they are not central to housing. An example

of this was observed at Fort Bragg. At one play area observed, the basketball court was empty. Within sight of the court were four youths playing basketball at a private basket that had been put up at the street curb. When asked why they were playing in the street and weren't over at the court, the reply was that they were just fooling around and that they used the other court frequently but mostly for more serious play.

At another "turnkey" playground with a paved play area next to the equipment play area, some teenagers had erected a volleyball net. The ten of them were playing volleyball while about ten additional young children (5-7 years in age) were playing kickball in another open space.

Self-Help Play Areas

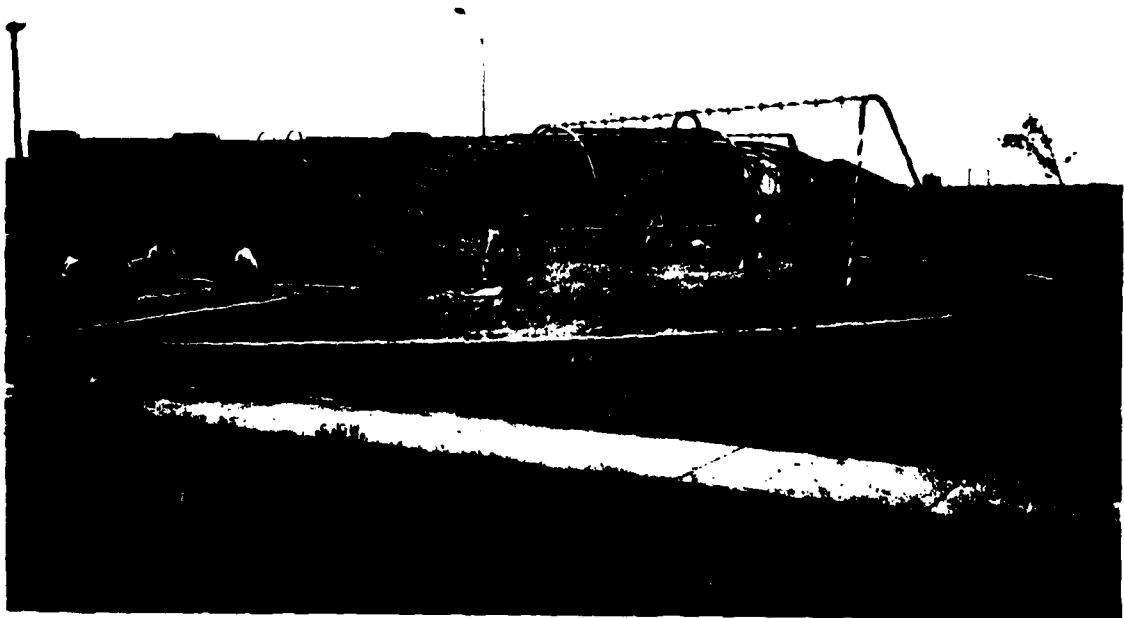
The biggest success of these areas appears to be their location. All but one of the four areas we saw were centralized to the backs of several houses making them especially appropriate for preschool children under supervision of parents.

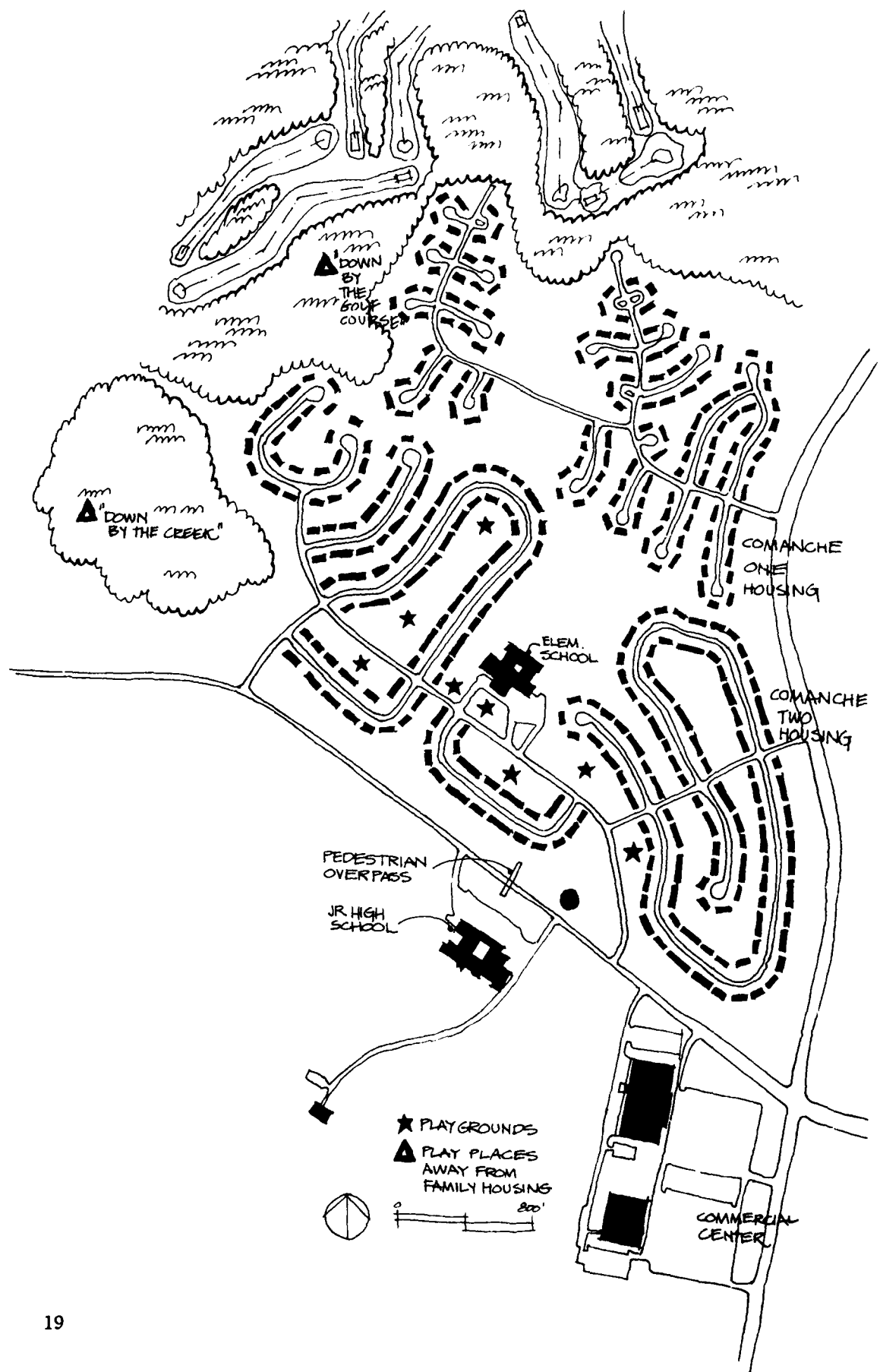
When asked, each child could point to his or her house. On the other hand, these areas were not clearly linked to other types of play areas, and there was no evidence of various ballgames taking place near them. The lack of variety of equipment that was chosen was disappointing. When neighborhood groups did take the initiative to do something extra, the effort looked a little thin. The availability of a book like Paul Friedberg's Handcrafted Playgrounds: Designs You Can Build Yourself, a \$5.95 paperback from Vintage Books, or one of the others to be recommended in our Abstracts Document, could stimulate and encourage would-be self-help designers and builders. The self-help program could also use a guide that recommended pieces of equipment, the number of pieces an area might require, the mixture of equipment for different age groups, and general site layout designs.

FORT HOOD ARMY BASE FAMILY HOUSING PLAY AREAS

BASIC DATA

Client	United States Army
Address	Fort Hood, Texas 76544
Date	1976-1978
Users	Children of surrounding family housing
Size	"Turnkey" play areas, each 1,600-2,000 sq. ft.; neighborhood revitalization tot lots each 1,600-2,000 sq. ft.
Cost	Not available
People Interviewed	Several children





PROGRAM DESCRIPTION

Fort Hood has two ongoing programs that generate play areas among family housing. The first is the "turnkey" housing program which requires that play areas be a part of the development package submitted for consideration and review. The second is a part of a revitalization program for older housing areas. Currently the emphasis in the second program, because of space and the character of young Army families, has been on tot lots. Eleven tot-lot play areas will be constructed as part of the revitalization of Walker Village (569 units) which will create a ratio of one tot lot for every 50 families.

FACILITY DESCRIPTION

"Turnkey" Play Areas

The team visited several playgrounds in a "Turnkey" housing area called Comanche II. Each play area was sited in a similar way, in the open "public" green space behind the housing units, and with one exception each was composed of the same metal play equipment. The exception was a play area built out of concrete and timber. From most of the play areas it is possible to see one or more additional play areas.

The equipment typically included:

- sand area with concrete curb
- a tots' swing set
- a youth swing set
- a slide
- a merry-go-round
- arched climber
- a street light

If there was any organizing concept besides having a reasonably safe amount of space around each piece of equipment, it was that there is nothing important in the center.

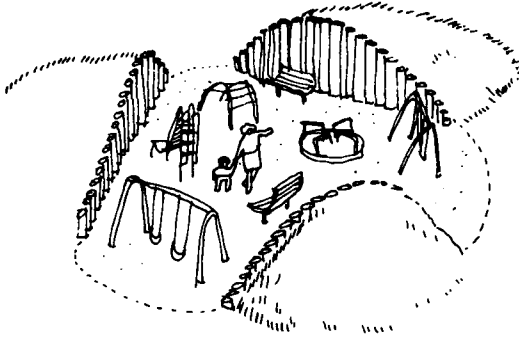
Neighborhood Revitalization Tot Lots

The tot lot areas at the older housing area, Walker Village, were sited in the "community" backyard space between 10 to 15 units where "group" garages had previously been.

The most striking features of the tot-lot areas were the berms and timber-pole retaining walls that were used to define the play area.

The steel-pipe equipment provided included:

- seating
- a small youth swing set
- a merry-go-round
- a tots' slide
- a tots' climbing arch



OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE

The Comanche II housing area was visited at about 6:00 p.m. on a warm but not hot summer evening. The children reported that dinner time for most would be 7:00-7:30. Children were at all but one playground where the equipment was broken. In addition, there were children playing on the sidewalks and in the front yards of the houses. Children weren't observed in the backyards except at the play areas. At least twice as many children were along the streets than at the playgrounds.

The children at the playgrounds could point to their houses. Smaller children were accompanied by their parents or older brothers and sisters. Some of these children had their bikes.

COMMENTS FROM INTERVIEWS

The team interviewed several children at one of the "turnkey" playgrounds. The following summarizes their comments about play, playgrounds, and to some extent life on the base:

- All of the children had lived other places; they offered that this was the first place with a playground and that they liked it.
- Typical days for several of the children included scheduled activities like band practice and unstructured activities like "T"-ball (a kind of baseball game).
- When asked what they did last Saturday they responded with a variety of answers including going to Dallas, going fishing, and going bike riding.
- The group suggested that they play outside a lot.
- Several children mentioned playing in their carports.
- When asked with whom they play, they most often commented that they play with the same children all the time.
- Places they go fairly frequently include to the park, to the field (between the houses), to the creek, and to the commissary to buy candy and records.
- When asked what is best about the "Turnkey" playgrounds, the most general answers were first the fields, and second the swings.
- When asked what would make the places better, the following suggestions were made most frequently: get rid of rocks, then have more grass, and have more slides and swings.
- Places they disliked included the junior-high school because "it gets broken into."
- The children talked about things "down by the creek."
- They bike, take the bus, or are driven frequently to the base swimming pools.

- Some of the older children ride their bikes off base; most don't. The most frequent destination is a small town, Coppers Cove, about five miles.

ASSESSMENT

Microclimate

The "Turnkey" play areas are all without trees and are very much in the open. Grass doesn't grow well in the sandy Texas soil and it is doubtful that it will ever be watered enough, if at all, to make it grow. Thus the logic of applying a Radburn-type green-belt plan to a Texas climate must be seriously questioned.

Adjacent Grassy Areas

The children interviewed were very aware that some of the play areas had better ball playing fields next to them than others. The quality and convenience of a ball playing area near the playground appears to be a basic criterion children use to evaluate the quality of the playground itself.

Network of Play

The children participate in a wide variety of play experiences, some of which take them on hikes or bike rides out of their immediate neighborhoods, others that bring them back almost on a daily basis to a particular playground for a combination of ball games and equipment play. Younger brothers and sisters often are required to tag along and areas that provide for a variety of age groups from preschoolers to young teens and accompanying adults would better serve their needs than the same variety isolated into their own areas.

Accessibility in the Neighborhoods

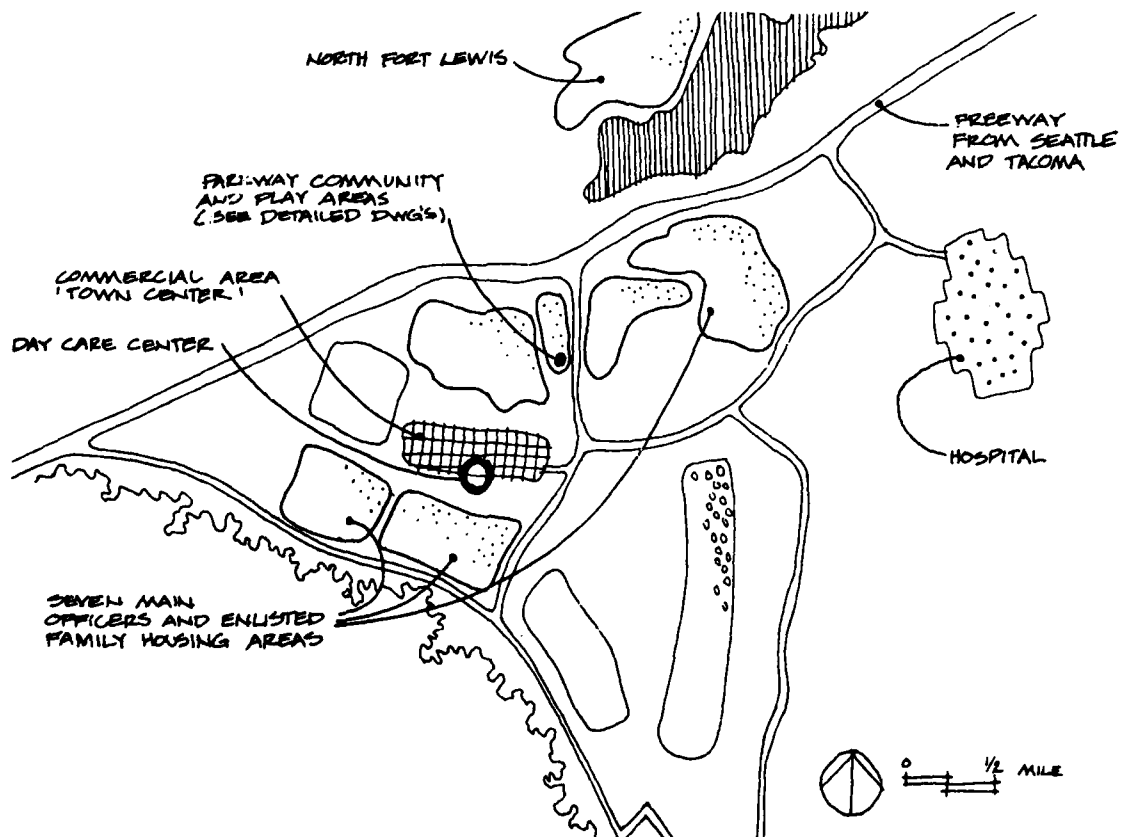
The ideal ratio of play-to-family housing was one play area for each 50 dwelling units. That ratio would make a play area visible from each house if the site planning was

handled properly. The only disadvantage in developing playgrounds based only on a ratio goal is that there is no incentive to make any one different from any other and no incentive to conceive of "specialties" for particular sites that might attract children from the whole base. Thus a network or a continuum of areas and activities rather than separate facilities isolated from each other would be an appropriate planning concept.

FORT LEWIS ARMY RESERVE PLAY AREAS

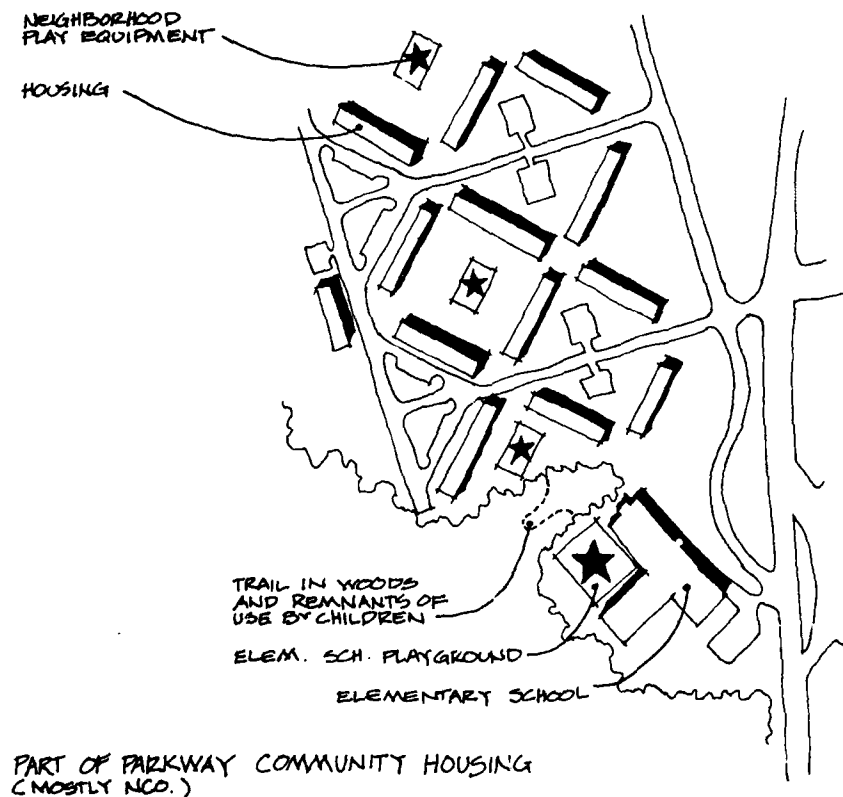
BASIC DATA

Client	United States Army
Address	Fort Lewis, WA 98433
Planner	Directorate of Facilities Engineering/ Fort Lewis
Date	1940s through 1970s; most playgrounds installed in the 1970s
Users	Children, mostly preschooler and elementary school age of on-base personnel
Size	A few scattered pieces of play equip- ment in 1 to 1-1/2 acre sites
Cost	Not available
People Interviewed	Stan King, Family Housing Maintenance Engineer



PROGRAM DESCRIPTION

As at other bases visited, children's outdoor needs, and playgrounds as a part of the response to these needs, seem to have been an afterthought in planning family housing at Fort Lewis. There is no explicit program for children's play areas at Fort Lewis. Some play equipment was authorized for each family housing area by the Directorate of Facilities Engineering in the early 1970s, but little more is anticipated.



FACILITY DESCRIPTION

There are 10 distinct housing communities at Fort Lewis, 7 of them in the main family housing areas of South Fort Lewis. The planning strategy, firmly endorsed by the Commanding Officer and the planners in the Directorate of Facilities Engineering, is for mixed officers-enlisted housing and for strong community identities.

Housing areas are planned on a modified Radburn plan, with neighborhood semi-enclosed park space behind housing, though the housing faces the streets (see St. Francis Square). Most clusters of housing have some play equipment in the park space. Equipment is of two kinds: metal catalogue-selected climbing-swinging apparatus; and wood log climbing equipment, the latter mostly built by weekend reservists.



Three of the housing areas have adjacent elementary schools with traditional metal play equipment accessible to children at all times. There is also a preschool and child care center on base, both with scattered play equipment (more extensive at the preschool) but behind chain link fence.

There are a number of other outdoor areas and indoor recreation facilities on base, including pools, baseball diamonds, one with stadium stands, a football field and track with stands, many open spaces, bowling alley, amusement park, roller skating rink, gymnasias, tennis and handball courts, and so on. Most of these, however, are near the town center and not in the ten residential communities.

Finally, the base and the family housing areas in particular are ringed with woods, fields, and rolling topography. Many of the housing areas and some of the schools back on dense secondary growth, and there are large fir and oak trees throughout the residential areas.

ASSESSMENT

Though there are numerous recreation facilities at Fort Lewis for older children and adults, there is little specifically for preschoolers and elementary school age children, and what there is is not located near family housing.

By far the majority of younger children we saw outdoors were in the front yards, near the streets, or on house steps and porches. Relatively very few were seen in the designated play areas behind the housing, except when they were a captive audience as at the Child Care Center. Somewhat ironically, several families had their own play equipment inside a fenced backyard, even when there was additional equipment in the immediately adjacent common park.

With regard to planning and design features which support child development, activity observed on designated play equipment was less varied and rich than that observed elsewhere in the residential areas, and involved less varied ages and cultural mixes than in the undesignated play spaces on the streets. For example, children were observed quietly floating boats and watching their reflections in pools of standing water, while others were playing dolls or house on the front door steps, and still others were playing quietly in the grass and soil under large trees. Meanwhile, no children were playing on the nearby metal play equipment.

Generally, more children were seen playing with features of the natural environment, and in front of dwelling units, than on designated playgrounds or playing fields. In one housing





area--Parkway, see drawing-- "kid tracks" were seen in bushes near the housing. This little area of woods is a wonderful, varied area, rich in wildflowers, old fallen logs, and all sorts of places for imaginative and exploratory play, while the adjacent elementary school playground had metal swings, and slides. Although this observation fits other more carefully conducted studies (e.g., Brower and Williamison, 1974; Hart, 1973, 1974), it could either be attributed to time of day (this was fairly late afternoon), random occurrence (we were only there one day), or limitations of metal play equipment relative to front yards, porches, natural environments and other anonymous "undesigned" play spaces.

REFERENCES

Brower, S.N. & Williamson, P. Outdoor recreation as a function of the urban housing environment. Environment and Behavior, 1974, 6, 295-345.

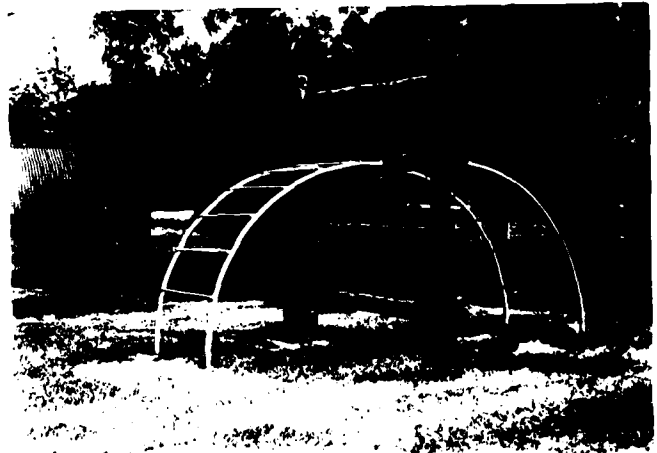
Hart, R.A. Adventures in a wooded wonderland. Natural History, November 1973, 68-69.

Hart, R.A. The genesis of landscaping: two years of discovery in a Vermont town. Landscape Architecture, 1974, 65, 356-363.

FORT MEADE ARMY BASE PLAY AREAS

BASIC DATA

Client	United States Army
Address	Fort Meade, Maryland 20755
Size	6 pieces of equipment spread over 4000 sq.ft.
Cost	Partially donated



FACILITY DESCRIPTION

This area is at a major base recreation area and was a service project of a battalion. It consists of six pieces of log and galvanized steel pipe equipment sited in a grassy area about 50 yards from a ball field and 25 yards from a parking lot.

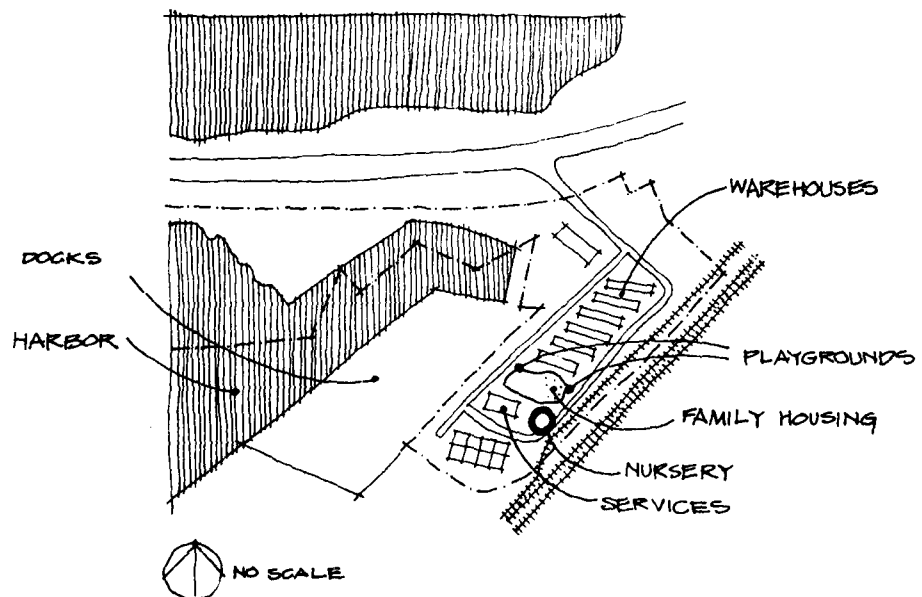
ASSESSMENT

The presumed goal for locating the playground near the ball field was to provide for diversions for younger children. The equipment and its arrangement looked more like a circular obstacle course than a playground, however. The picnic area across a good-sized pond would not be convenient for use. There was some evidence of use (the grass was worn away in spots) but not of heavy use. Nothing was done to designate an area for children.

OAKLAND ARMY BASE PLAY AREAS

BASIC DATA

Client	United States Army
Address	Oakland Army Base Oakland, California 94626
Engineer	Corps of Engineers
Date	Unknown
Users	Children of surrounding family housing
Size	Two playgrounds of ca. 1600 sq. ft. each on a 1/2 acre site
Cost	Unavailable



FACILITY DESCRIPTION

The Oakland Army Base is a military overseas shipping terminal which uses parts of the adjacent Port of Oakland wharves. Thus the base is primarily warehouses, train-to-dock transfer points, and truck unloading docks. Six blocks contain all the family housing and recreation for the 100 families on base. Of this, one street is lined on both sides by NCO family quarters, and one side of the next street is officers' family quarters, all barracks-style 2-story row housing.

The two playgrounds on the base are between the NCO and officers' housing.

The eastern one, and larger, is comprised of 8 pieces of scattered metal and concrete conventional play equipment (approximately 1600 sq. ft. in area) on a 1/2 acre site. The base of the area is asphalt and packed sand. Grass surrounds the site. There is also a 4600 sq. ft. Nursery playground across the street, but it is apparently vacant in non-nursery hours.

Equipment includes two metal swings, a curling slide, two sculptural concrete climbing devices, and other small metal climbing equipment. One park bench is nearby facing the area.

Other Child Recreation Areas

Casual observation, and questions to the Community Service officers, suggested there is very little for children to do on this base. Warehouses and wharves--always exciting to children elsewhere--are off-limits to children. There is an athletic field, but it is on the far side of a long, continuous public works building. There is a gym, but it is attached to the Officer's Club and is not used by unaccompanied children. There is a recreation center, but it is across a major road, and apparently unused by young children. There is no open space of any natural or even landscaped quality. The Nursery play yard is not used in non-nursery hours, and is dismal. The only place where children hang around is the teen youth center. Otherwise they hang around their houses, pick on each other, and generally have little to do other than watch TV.

ASSESSMENT

As we saw only one child near either of the designated playgrounds, it is impossible to properly assess it. In fact, we didn't see many children at all in the family housing area.

Our only assessment, therefore, is on the basis of a prediction in comparison with other bases and civilian play areas, the research literature, and our interviews with the community services staff.

The two designated play spaces seemed terribly inadequate for creative and exploratory play for the same reasons as the Nursery play yard (see Oakland Army Base Nursery). Both had a few scattered pieces of unremitting metal and concrete sculptural elements over a dangerously hard surface.

This type of equipment has been found to support gross motor play, chasing games, some competition, isolated and parallel play, short attention spans, short holding power, and no adult-child or child-child cooperative interaction.

CONCLUSION

There seems to be a real lacking of anything creative or worthwhile from a developmental point of view for children to do on this base. How typical this may or may not be of other bases we cannot tell. The early years of a child's life are absolutely crucial for later success and happiness. Learning and development happen all the time, everywhere; the rate of development is most pronounced in the first four or five years, and next most pronounced during the elementary school years, but development can only happen when there are stimulating and challenging things for children to do--not only in school or day care--but all the time.

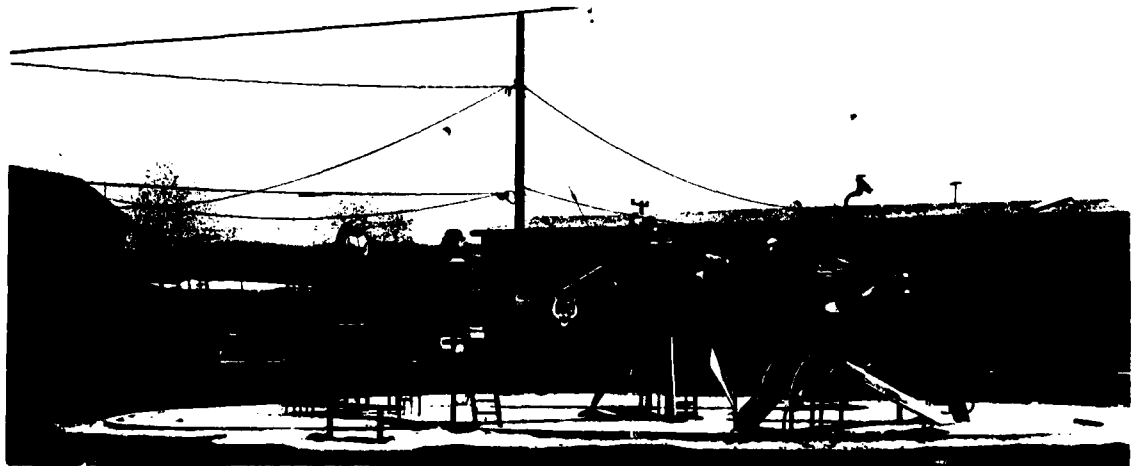
Environments suited for and stimulating to the developing child are a crying need on this Base--and likely others--and should receive a much, much higher priority than they presently do. This would necessitate considering all of children's needs during non-assigned time, and considering the totality of public open space and recreational facilities, not just isolated, designated "play" grounds.

ALAMEDA NAVAL AIR STATION PLAY AREAS

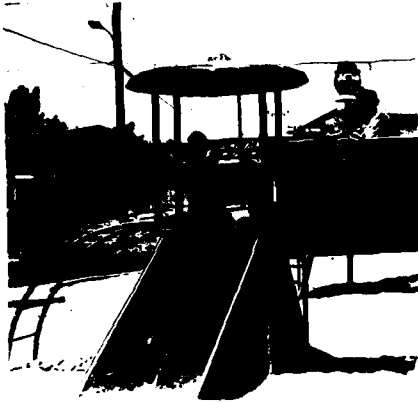
BASIC DATA

Client	Alameda Naval Air Station, USN
Address	NAS Alameda, California
Planners	Unknown
Users	Children of two separate housing areas: "Officer's Country," and enlisted/NCO family housing. No estimate of numbers or ages of children can be made.
Size	Various play equipment areas of ca. 100-200 sq. ft. of equipment on Radburn-type interior sites of ca. 3/4 acre in enlisted/NCO housing and on ca. 1/4 acre sites in Officer's housing
Cost	Not available

ASSESSMENT



FACILITY DESCRIPTION



In the Officer's housing area, designated play areas were of conventional fixed-in place play equipment (swings, monkey bars, slides, climbing frames). They were sited at the ends of curving streets (residential cul-du-sac plan).

In the two more extensive enlisted/NCO housing areas, play areas were located in the center of modified Radburn-type housing clusters and were for the most part made up of conventional scattered apparatus. One area, however, had a large sand pit in which a "Lunar Lander" combination climbing, running, and sliding apparatus was situated. It covered approximately 600 sq. ft., had many levels, many access and egress points. and was made of brightly painted metal.

Except for Alameda, on all other military bases visited, we observed many more children in the streets, cul-du-sacs, driveways, near bushes, on sidewalks, etc., than near any designated play areas. At Alameda the balance was about even. In these informal places, children were observed playing in a number of different ways:

- playing kick ball (12 children)
- sitting by oneself at the base of a tree
- riding on big wheels (2 children together)
- working on cars in driveway
- bicycle and tricycle riding
- talking informally together
- lying in the sun talking intently (a group of three children of mixed ages)



On the "Lunar Lander," 12 children of the same rough age, of both sexes, and judged to be of Fillipino heritage were animatedly running, chasing each other, sliding, challenging each other, posing for photographs (inevitably), and generally having a boisterous fun time.

LESSONS

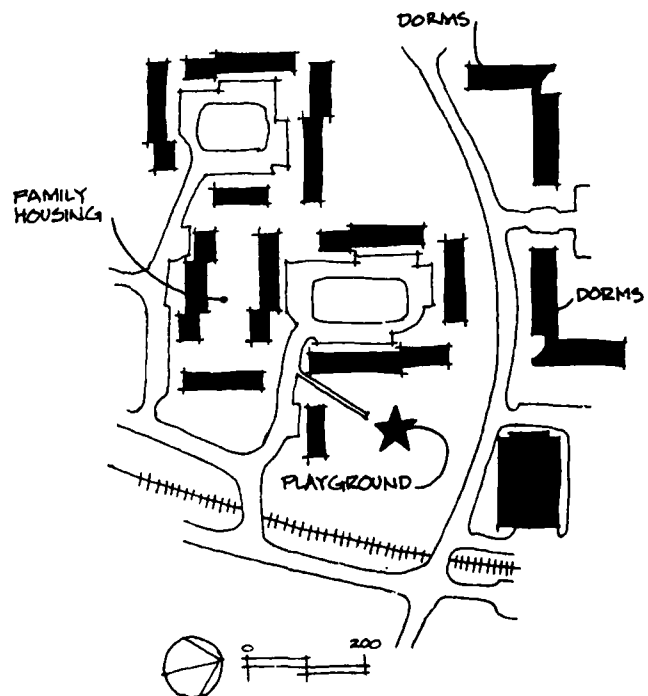
The "Lunar Lander" was clearly the most vital piece of play equipment seen at this base. This may be due to its large size, complexity, various heights, variety of activities it suggests, bright colors, soft sand surface underneath, and location near many children's residents.

The activities observed on the "Lunar Lander" were all of basically three types: large muscle activities, challenge, and verbal communication. The activities seen in informal places were of four types: large muscle activities, verbal communication, problem solving (cars), and quiet alone activity. The full range seems to need to be planned for in family housing areas, and in both designated play areas and informal areas accessible to children.

BOLLING AIR FORCE BASE FAMILY HOUSING PLAY AREAS

BASIC DATA

Client	United States Air Force
Address	Bolling Air Force Base Washington, D.C. 20332
Date	1977-1978
Users	Children of surrounding family housing areas
Size	2,000 sq. ft. and 500-1,000 sq. ft.
Cost	\$14,300 equipment and installation; \$7/sq. ft.
People Interviewed	Several children



PROGRAM DESCRIPTION

The two facilities observed at Bolling Air Force Base are directly associated with family housing areas. Both represent a concerted effort to develop play areas that aren't simply traditional steel equipment but also use wood-timber structures in an overall coordinated design of the whole play area.

FACILITY DESCRIPTION

One play area is at the corner of a family housing area and connected to it by a bike and pedestrian asphalt path. It is what is called a contemporary playground with variations of traditional equipment built of timbers rather than steel pipe. It is enclosed by a low fence of varying heights of "stepping stone posts" stuck into the ground. The fence defines both the area as a whole and several zones inside. The zones have sand floors.

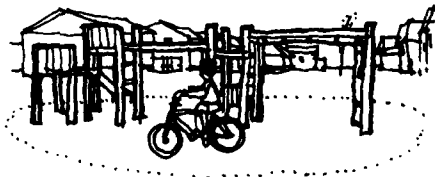


The dominant feature of the structure is the wood-timber pyramidal tower with its tire swing, small slide, and platform areas. Other equipment includes jumping platforms and slung seat swings.

Another structure visited in family housing is much smaller although more clearly located as a landmark in the center of the open-space network of a new housing area. The play area contained a single wood structure made of several parts including a slide, platforms, and two "bridge-ladders." There were no swings.

OBSERVATIONS AND INTERVIEWS

One member of the team discussed the playground with two children playing on it, both boys, 11-1/2 and 13 years old. They come to the play structure almost everyday. They also go to the pool, to the bowling alley, to their play forts in the woods, and down by the Potomac (off limits) for fishing. They reported that there were about ten similar playlots around the base. They reported heavier use at 4 to 6 p.m. Both liked the wood better than the "metal" playgrounds and liked it better because it was new and close to home, but suggested that the facility could use a water fountain and trash cans.



The team observed a single child continuously riding his bike around the second play structure area. In ten minutes he stopped several times, but made no attempt to actually play on the equipment.

ASSESSMENT

Both the interview with the children and a brief observation of use leads to the following hypotheses:

- that children appreciate play areas built with timber equipment rather than galvanized steel pipe

- that children come to play areas for quiet play or as a place to meet, talk, and wait as much as they do to use it for active play
- children in the age group interviewed (11-13 years) have considerable mobility because they have bikes and, while they use them to extend their world, their "home base" for meeting can still be the neighborhood playground

BIG TOYS INSTALLATIONS

COMPARATIVE INTRODUCTION

BASIC DATA

Client	Various elementary schools, parks and recreation departments, and community groups in the San Francisco Bay Area
Address	Four locations at the San Francisco Peninsula: <ol style="list-style-type: none">1. Holbrook-Palmer Park Playground Atherton, California (Big Toys, Inc.)2. Henry Ford Elementary School Playground Redwood City, California (community-built)3. Oak Knoll Elementary School Playground Menlo Park, California (community built)4. Children's Health Council of the Mid-Peninsula Handicapped Children's Playground Palo Alto, California (Big Toys, Inc.)
Designer	Jay Beckwith/Forestville, California
Manufacturer	Big Toys, Inc. (1, 4), Northwest Design Products, Inc., Tacoma, Washington; others (2, 3) community.
Sizes	Vary from a 460 sq. ft. structure on a 1600 sq. ft. structure on a 4200 sq. ft. site
Cost	Vary from \$2150 plus site development and free labor to \$7000 plus site development and free labor
Materials	Western Red Cedar logs, 5 1/2 to 8 in. diameter, drilled 1 ft. on center; 1 in. galvanized steel pipe; 16 gauge steel skides; 1/2 in. nylon climbing net; aluminum collar fittings; recycled tires; 8 in. of soft, loose sand underneath -- Big Toys. Locally-purchased lumber and hardware; Douglass Fir; medium-density overlay plywood -- others.
People Interviewed	Jay Beckwith Several children

SUMMARY FOR FOUR "BIG TOYS" INSTALLATIONS IN CALIFORNIA

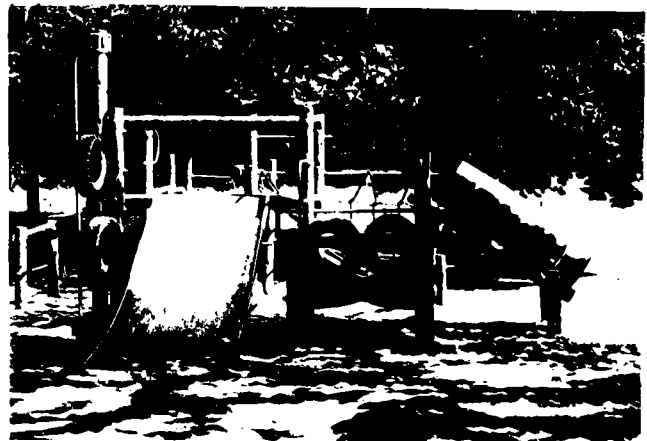
PLAY AREA	DATE	DESIGNER/ MANUFACTURER	SIZE (a)	COST (b)	COST / sq
CHILDREN'S HEALTH COUNCIL	1977	BECKWITH-BIG TOYS	.	\$7,000	.
OAK KNOLL	1974	BECKWITH	1500 sq	6,200	4.1/sq
HENRY FORD	1975	BECKWITH	1500 sq	3,000	2.0/sq
HOLBROOK-PALMER	1978	BECKWITH-BIG TOYS	460 sq	2,190	5.0/sq
AVERAGES					(c) 4.5/sq 2.0/sq

- a Sizes are for the area of the installed play structure only.
- b Cost does not include site preparation, landscaping, or labor, the latter of which are provided free by the community and the former are provided by the sponsoring agency.
- c \$4.50/sq. ft. for Big Toys; \$2/sq. ft. at 1973 prices for community designed and built play structures.

HOLBROOK - PALMER PARK PLAYGROUND

BASIC DATA

Client	City of Atherton, California
Designer	Jay Beckwith/Forestville, California
Manufacturer	Big Toys, Inc./Tacoma, Washington
Date	1978
Users	Elementary school age children of upper-middle class neighborhood surrounding park
Size	460 sq. ft. structure on 1,600 sq. ft. site on edge of several acre park
Cost	\$2,150 plus site preparation and free parent's labor



HENRY FORD ELEMENTARY SCHOOL PLAYGROUND

BASIC DATA

Client	Henry Ford Elementary School, Redwood City, California
Designer	Jay Beckwith/Forestville, California
Users	Elementary school children on recess plus middle-class neighborhood children in off-hours
Size	Ca. 1,500 sq. ft. structure of Douglas Fir and medium-density overlay plywood on ca. 2,400 sq. ft. site on far corner of schoolground
Cost	\$3,000 plus site preparation and free labour (6 months planning time plus 2 weekends for construction)



OAK KNOLL ELEMENTARY SCHOOL PLAYGROUND

BASIC DATA

Client	Oak Knoll Elementary School, Menlo Park, California
Designer	Jay Beckwith/ Forestville, California
Date	1974
Users	Elementary school children during recess (no access from neighborhood)
Size	1,500 sq. ft. structure on 2,400 sq. ft. site immediately adjacent to and down a slope from the elementary school
Cost	\$6,200 plus site preparation and free labour

CHILDREN'S HEALTH CENTER OF THE MID - PENINSULA HANDICAPPED CHILDREN'S PLAYGROUND

BASIC DATA

Client	Children's Health Council of the Mid-Peninsula, Palo Alto, California
Designer	Jay Beckwith/ Forestville, California
Manufacturer	Big Toys , Inc./Tacoma, Washington
Date]977
Users	Handicapped children of preschool age
Size	4,200 sq. ft. yard with several scattered pieces of "Big Toys" equipment
Cost	\$7,000 of equipment



COMPARATIVE ANALYSIS OF BIG TOYS INSTALLATIONS

FACILITY DESCRIPTION

SITES FEATURED

Holbrook-Palmer Park Playground and
Henry Ford Elementary School Playground

"Big Toys"-type playgrounds were the only manufactured, conventional type playgrounds included in our case study site visits.

The Holbrook-Palmer Park Playground (see first photograph above) is a standard "Big Toys" structure (#SB11 in their catalogue). The Henry Ford Elementary School Playground (second photograph) is an earlier one-off design predating when the designer, Jay Beckwith, joined Big Toys as their chief designer for school yard installations.

Big Toys are manufactured modular play structure component systems from which a client can select already designed structures (e.g., the SB-11) or may compose their own structure with design guidance from Beckwith and Big Toys.

Holbrook-Palmer features a wide slide, tunnel slide, slide pole, banister slide, climbing cargo net, climbing tires, steering wheel, and various ladders all leading up to or coming down from a central 4-1/2 ft. high platform. The organization is thus basically radial with activities leading not to other activities but to the sandbox base.

Materials are standard Big Toys materials as detailed above in Basic Data.

No parts are dynamic (save a slight bounce in the cargo net), and except for the sand, there are no loose parts.

The Western Red Cedar logs don't need preservation. For visual reasons, the steel, aluminum, and wood are all in their natural state.

None of the sites had any overhead lighting, water, or toilet facilities. Site development was very minimal.



No overall siting organization was evident. Holbrook-Palmer and the other standard Big Toys were either 2 or 3 pieces of equipment scattered in space, or 1 major piece isolated from other park or playground features. The structures are extremely vandal proof and are said to be quite safe (Manufacturer's Catalogue).

The organization of the Henry Ford Elementary School Playground is basically a lazy "S" with ends of activities leading to other activities. It features five 6 ft. circles of medium-density overlay plywood with climbing, swinging, and overhead hand-walking devices connecting the circles. At either end of the main form are two 4 ft. steel geodesic domes and other conventional playground equipment. The base is sand inside two 1 x 8 in. planks.

Materials are a combination of Douglas Fir, steel pipe, outdoor carpet, oil drums, stainless steel slides, and tires, etc. in various shapes, sizes, and alignments. The circles are brightly painted in sky blue and white. All wood and hardware were locally purchased.

OBSERVATIONS AND INTERVIEWS

It is impossible to give a fair and comprehensive assessment of these four Big Toys-type playgrounds for, despite a clear, warm Saturday afternoon, children were seen on only one of them, the specially-designed Henry Ford Playground.

The main activities seen at Henry Ford were gross-motor physical activities (climbing, running, chasing, swinging). No individual, quiet, small motor, or creative activities were observed. The mood was very lively, almost hyperactive.

All activity was confined to the main "S" structure; nothing happened in the sand or on the metal equipment.

Six children were informally interviewed at Henry Ford. Generally they said that though they played also at two other play-

grounds (on more conventional equipment), they considered this one the best as it was more fun and had more things you could do. They also mentioned having been at several other community places today (drugstore, streets, other playground, here), and that they would be leaving here soon.



ASSESSMENT

Jay Beckwith, the designer, considers that "Big Toys" supports physical learning and motor planning challenges, dynamic balance (jumping, swinging, etc.), and social interaction (fantasy play, group play, etc.) for infants through 11 year olds. He views the structures as stage sets for play. He suggested that cognitive play is not particularly promoted and supported by "Big Toys."

or any other commercial equipment. It's very difficult, he says, because Big Toys is "an armature and without smaller, flexible, and loose elements, it's pretty dry." But the four elements of physical learning, dynamic balance, social interaction, and cognitive play are necessary, he thinks, for a truly successful play yard.

He also added that in his opinion, Big Toys and similar commercial equipment are best only in school settings, that they are not most successful in park settings unless in a very high density area or in combination with

other types of play experiences. "No environment will be complete," Beckwith maintains, "if people do not put something of themselves into it or allow the people who live in that space the power/control to change it."

They seem to be very active places, and thus the sand around would be a dangerous place for infants.

The play structures would seem to support physical motor activity, primarily of the gross-motor, large muscle, and balance kinds, and to encourage challenge and a low level of competition. Other social activities (like cooperation, quiet conversation, intimate, emotional situations), other fine motor activities, and creative-constructive and other primarily intellectual activities were not seen and it is difficult to imagine them being stimulated or facilitated by these structures. To reiterate, the Big Toys installations visited seem to be settings mainly for gross motor, balancing, and challenging activities.

The structures are vandal proof, have no special provisions for handicapped children, and seem fairly safe (e.g., the highest platform being 4 1/2 ft. and the base being loose sand).

CONCLUSION

These are nice, safe, vandal proof structures.

As they seem mainly to cater to motor challenge activities they should be sited near natural settings for shade and other play areas for variety.

The larger the facility and the more custom designed, the more use it seems to get. This may be for two reasons: (1) more perceptual variety and alternatives, i.e., less uniformity, more different sized and shaped elements and spaces; and (2) more things to do, both more variety and more in absolute numbers.

All these structures were community built or assembled, and this seems a major strength of them, especially the one-off Henry Ford Playground where the parents and teachers were involved with planning, design, and construction.

BROOKLYN CHILDREN'S MUSEUM

BASIC DATA

Client Brooklyn Institute of Arts and Sciences

Address 145 Brooklyn Avenue at St. Marks Avenue
Brooklyn, New York 11213
(212)-735-4400

Director Lloyd Hezekiah

Architect Hardy Holzman Pfeiffer Associates/New York

Consultants Edwin Schlossberg, Exhibition Conceptualization
Goldreich Page & Thropp, Structural
Hannaham & Johnson, Mechanical and Electrical
Robert A. Hansen Assoc., Acoustical

Date 1975 (Formal Opening--1977)

Users Children of all ages from New York's
five boroughs

Size 30,000 sq. ft.

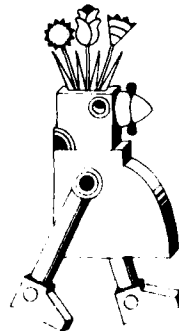
Cost Building--\$3,250,000 \$141.7/sq. ft.
Exhibit-- \$1,000,000

References A museum designed for the children of
Brooklyn, Architectural Record, April 1972,
151, 114-115.

The Brooklyn children's museum and MUSE.
in Educational Facilities Laboratories,
Hands-On Museums. New York: Author,
1975. pp. 34-35.

Esprit grows in Brooklyn. Progressive
Architecture, May 1978, 59, 62-67.

The Brooklyn Children's Museum. Brooklyn,
N.Y.: Brooklyn Children's Museum, 1977.



PROGRAM DESCRIPTION

The Brooklyn Children's Museum is a free, science-oriented museum based on the concept of participation with exhibits. This kind of museum is referred to as a "hands-on" museum. The program also includes frequent school group visits during the school year. It is the oldest children's museum in the world, and in 1977 opened a new building.

FACILITY DESCRIPTION

SITE

Sited in the heart of Brooklyn, it fills an old park and tries to recapture the lost space by being partially sunk into the ground with berms on its sides and a landscaped amphitheater on the roof.



The new facility replaces another facility called MUSE, also by the same architects. The MUSE facility was similar in program but its small size could be an appropriate model for a community of 30,000-50,000 people like the larger Army bases.

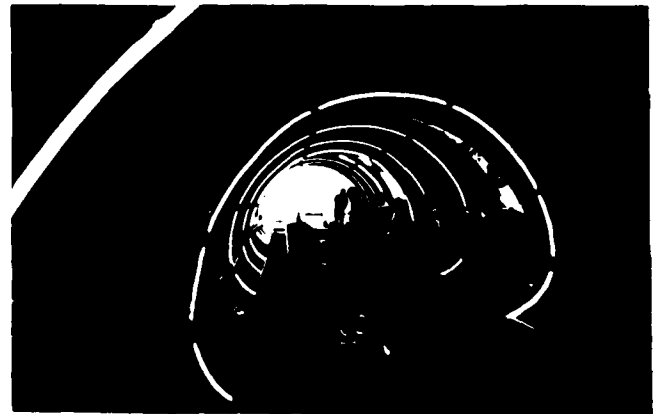
A contract is to be let in 1979 by the owner, the City of New York, for completion of site work.

CONCEPTUAL ORGANIZATION

The interior is divided into upper levels for exhibits and lower levels for workshops and support facilities. The terraced exhibition area is organized into six major topic areas for participatory learning:

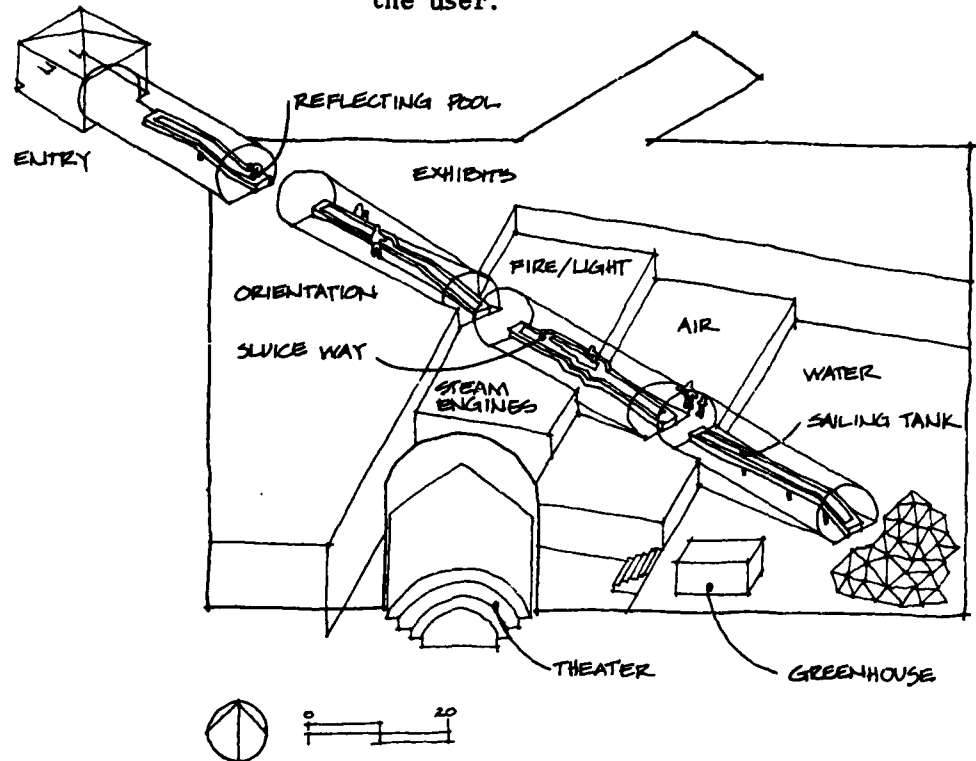
- self awareness and identification
- fire, light, and steam
- water and hydraulics
- air, wind, and pressure
- earth, soils, and greenhouse
- cultural links and drama

The conceptual organization of the facility supports and attracts children both in the use of seductive features, like water play, and with the design of the overall facility, a series of stepped levels connected by plastic modules that can be climbed through. Large groups can be subdivided into more desirable small workshop groups that proceed from level to level and exhibit to exhibit.



Dramatization of Entry Sequence

The diagrammatic plan shows the significance of the water tunnel as the element in the single large room that dominates the facility and that orients and organizes the user.



BUILDING SUBSYSTEMS

Structural Systems

The exterior container is poured-in-place concrete, the roof structure exposed steel, the interior floors heavy timber with exposed beams, and the exhibits areas an exposed, suspended pipe grid system. The structural system has a special track for flexibility in display and hanging things. The structural system also supports a play area and amphitheater on the roof.

Electrical System

Spaced outlets in the ceiling provide flexibility for organizing and changing exhibits.

Acoustical Features

Classroom spaces are provided on the lowest level in four separate areas. These types of activities do not occur on the exhibition levels.

The large open room is not particularly good for noise control. Noise from exhibits both enlivens the whole environment and distracts from concentration on specific activities. The water provides a general masking noise but the steam engine whistles, bangs, and horns easily rise above it. As summer or weekend entertainment, this is terrific; as environment for programmed school science class activities, it has proved inappropriately distracting.

Lighting

Flourescent light is reflected off the ceiling with a small amount of down lighting sneaking through the reflector. The diffused light isn't as pleasant at the daylight that comes through the full height galvanized industrial sash at the lowest level. The project contains one skylight and one 40-foot-long clerestory window.

OTHER SPECIAL DESIGN FEATURES

Views

Offices have interior views into the big space.

Interior Design

The interior is a fair example of the architect's style of decorating. The mish-mash of garish colors and patterns isn't as provocative as it is in some of their later projects, but it is still exciting and fun for most visitors though disturbing to most architectural sensibilities.

Energy Conservation

The building is mostly underground and windowless except for one corner--an excellent beginning for an energy-saving facility. However, it is also a single large volume with a ceiling height of 15 to 20 feet for much of the facility, not a preferred concept for an energy-saving building.

Accommodations for the Handicapped

The ramp connects all the basic exhibit levels and a wall lift ramp provides access to the lowest museum level and the museum shop.

ASSESSMENT

The Brooklyn Children's Museum is an excellent example of a design where adults have focused on capturing the imagination and instincts of children. Like an **adventure playground**, it involves the child and has a mish-mash aesthetic that doesn't look serious enough or controlled and refined enough for most adults. Apparently--and more importantly--it works for the children.

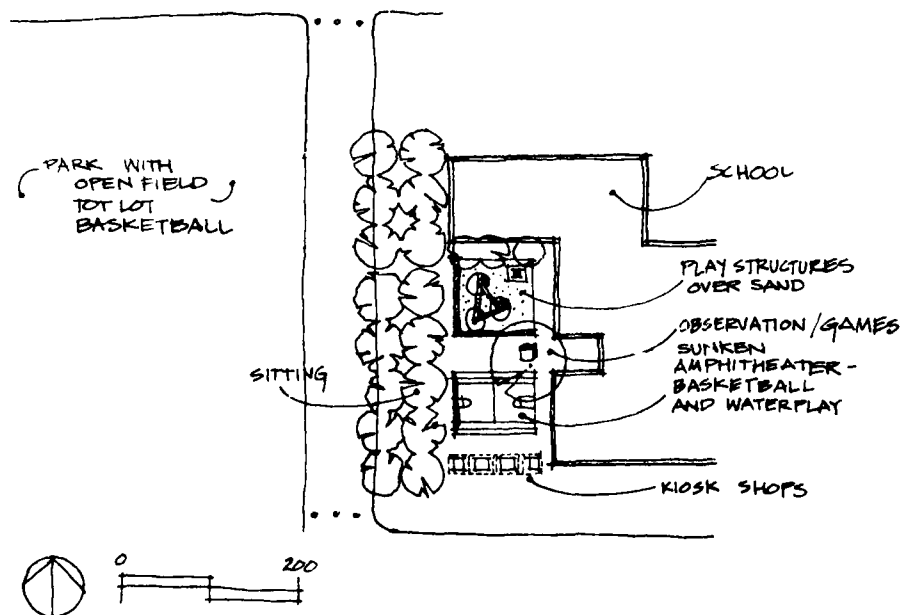
The outside of the facility is not as successful. The berms are too steep to be able to handle the grass planted on them. The roof area is under utilized and is apparently unpopular in the neighborhood. Adventure playgrounds have learned to mask their different aesthetic by fences; the architects could have learned from these examples and decided to be "nicer" to the neighborhood by disguising its self-conscious messiness from the outside.

The visiting team expected the roof area to be directly linked to neighborhood paths and activities. Unfortunately, even with the berms, the roof is a roof, and is isolated by being up high, and is not integrated with its immediate neighborhood or park.

BUCHANAN SCHOOL PLAYGROUND

BASIC DATA

Client	Vincent Astor Foundation and the Washington D.C. Board of Education
Address	13th and E Streets, S. E. Washington, D. C.
Architect	Pomerance & Breines/New York
Landscape Architect	M. Paul Friedberg & Associates/New York
Date	1968
Users	School children and adults in the neighboring community
Size	
References	Play plaza "cools it". <u>Progressive Architecture</u> , June 1968, 49, n.p. Friedberg, M.P. <u>Playgrounds for City Children</u> . Washington, D.C.: Association for Childhood Education International, 1969. Pp. 30-33. Friedberg, M.P. Public spaces for total use. <u>Design Quarterly</u> , 1970, No. 77, 12.



FACILITY DESCRIPTION

The playground double-functions as a playground for a public school and after school the playground becomes the domain of the community. The conceptual organization is a division into four main areas: small kiosk-like shops, a sunken basketball area, an over-view area, and a sculptural play area. Clues are provided for both age group separation or separation by activity. Several large trees shade the site.



The sculptural play area is dominated by a series of stone-clad conical mounds with monkeybars between them and slides down them.

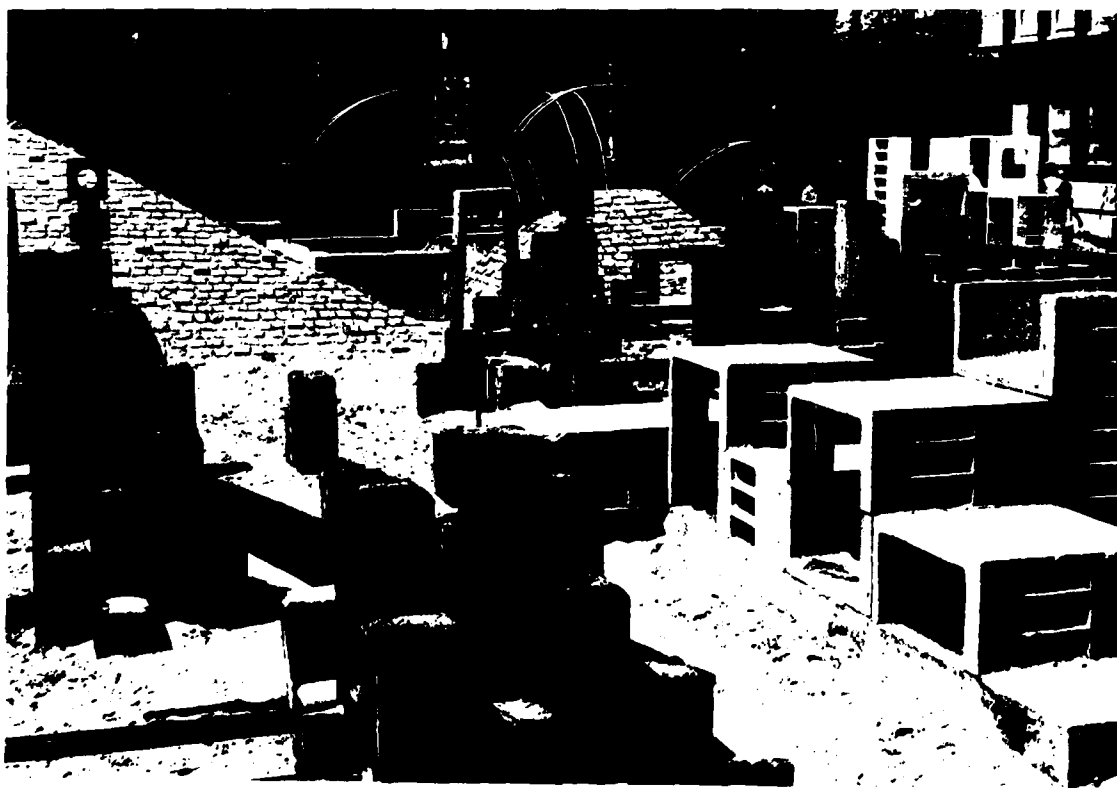
The surface materials are either very hard concrete or granite or soft sand. The furnishings, benches, pergolas, etc. were heavy stock timber but over several years of hard use had been vandalized and broken but not replaced or maintained. Broken glass and graffiti were also in evidence.

ASSESSMENT

The playground is an enigma. There is obviously a need for a well-furnished playground to serve the school and the community but the appropriateness of this playground

for that purpose is not clear. There are major and minor complaints like the inappropriateness of the sand both because of real or imagined health problem, the real problems of broken glass, and heavy use and no maintenance. The kinds of play equipment provided and the slipperiness and harshness of the granite rocks on the mounds are problems. Unfortunately, the playground doesn't provide enough clear things to do and the children seen there are hard-pressed to figure out just how to play. If the concept of linked play is in effect here, it isn't clearly evident to the children. Tag according to locals is the dominant activity in the play area.

The partially sunken basketball court is clearly popular even with broken back boards and baskets. Its role as a double-functioning basketball-spray pool is very successful, according to those there.



The "shops" area looked more like a series of small jailhouses with wire grates, chain-linked windows, and padlocked doors than like a community amenity, but programs were operating out of the facility providing services and a place for marginal business. Clearly the shops don't look like the street market the designers imagined them to be.

Because of its central location, this facility serves several functions, which increases its overall use. Unfortunately, while the usage is clearly high, the needed maintenance that comes with high usage has been missing and the project looks older than its several years.

The zoning and mixing of activities and age groups in the playground is apparently successful as is the double-functioning of the basketball court and the spray pool. Nevertheless, the range of activities available in the playground area is too limited and the monkeybar arcs and the climbing steps don't serve a cross-section of the kids playing there.

CENTRAL PARK CONTEMPORARY PLAYGROUNDS

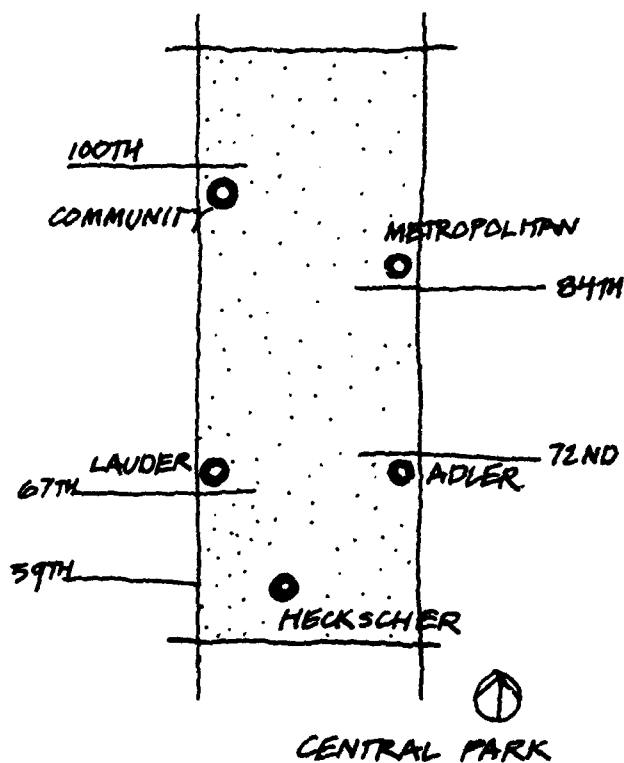
COMPARATIVE INTRODUCTION

BASIC DATA

Client	Parks, Recreation, and Cultural Affairs Administration, City of New York and Parents for Improved Playground, Inc.
Address	Five locations in Central Park, New York 1. Adler Central Park Play Area 72nd Street and Fifth Avenue 2. Lauder Playground 67th and Central Park West 3. Heckscher Playground 59th Street and Central Park West 4. Metropolitan Museum Playground 84th Street and Fifth Avenue 5. Central Park Community Playground 100th Street and Central Park West
Sizes	Vary from 13,000 sq. ft. to 29,000 sq. ft.
Cost	Vary from \$85,000 to \$300,000 including all site preparation. Average around \$9/ sq. ft.
Interviewees	Several children and parents Richard Dattner Kenneth Ross

SUMMARY FOR FIVE PLAYGROUNDS IN CENTRAL PARK - NEW YORK

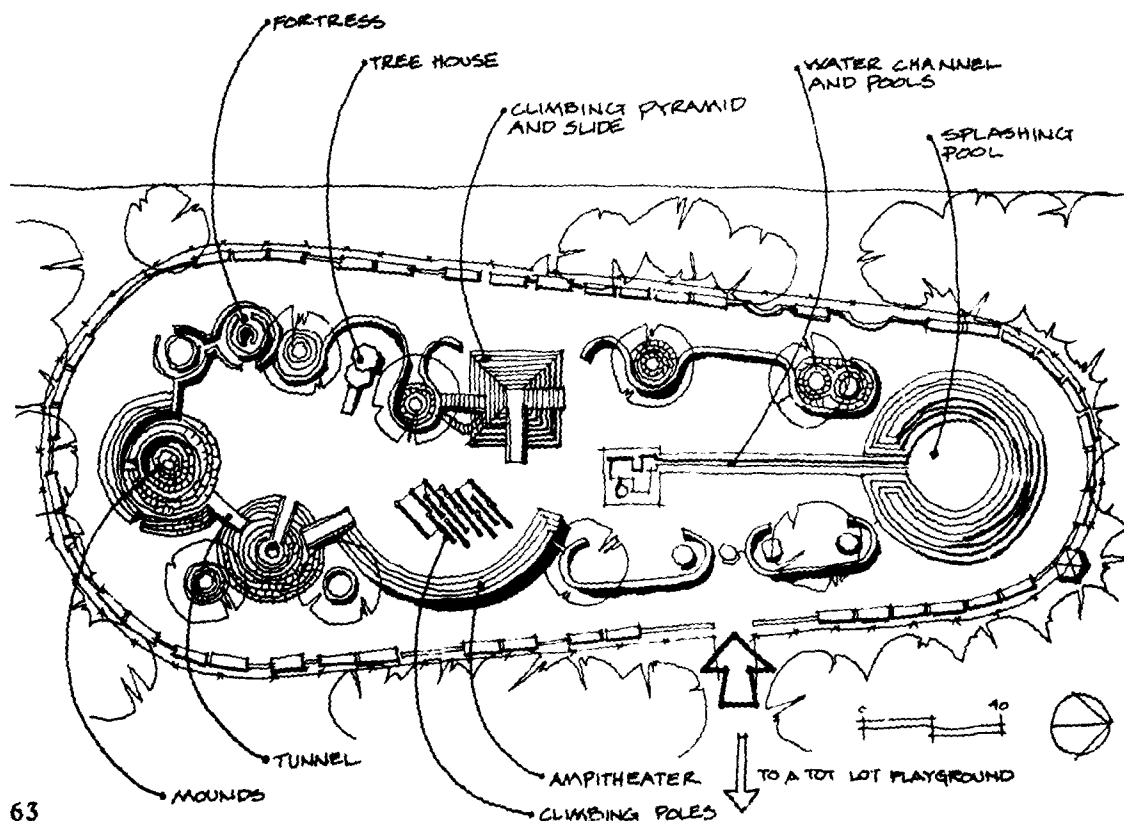
PLAY AREA	DATE	ARCHITECT	SIZE	COST	COST ϕ
LAUDER	1967	DATNER	13,000 ϕ	\$ 85,000	6.5 \$/ ϕ
HECKSCHER	1968	DATNER	.	250,000	.
ADLER	1970	DATNER	13,000 ϕ	120,000	9.5 \$/ ϕ
METROPOLITAN	1972	DATNER	22,000 ϕ	300,000	13.6 \$/ ϕ
CENTRAL PARK COMMUNITY	1972	ROSS, JACQUETTE AND RYAN	29,000 ϕ	165,000	5.6 \$/ ϕ
AVERAGES	1967-72		19,000 ϕ	184,000	8.75 \$/ ϕ



LAUDER PLAYGROUND

BASIC DATA

Client	Parks, Recreation, and Cultural Affairs Administration, City of New York
Address	67th and Central Park West
Architect	Richard Dattner, AIA/New York
Date	1967
Size	14,000 sq. ft.
Cost	\$85,000 (not including fence or benches); \$6/sq. ft.
References	Allen, Lady, of Hurtwood. <u>Planning for Play</u> . Cambridge, Ma.: MIT Press, 1968. Bengtsson, A. <u>Environmental Planning for Children's Play</u> . New York: Praeger, 1970. Dattner, R. <u>Design for Play</u> . Cambridge, Ma.: MIT Press, 1969.



PROGRAM DESCRIPTION

This facility was the first in a series of "new" playgrounds for Central Park in New York. The facility is built inside an existing shell consisting of a fence and benches. The core replaces an older conventional play area that was furnished with slides, swings, play sculpture, etc.

FACILITY DESCRIPTION

SITE

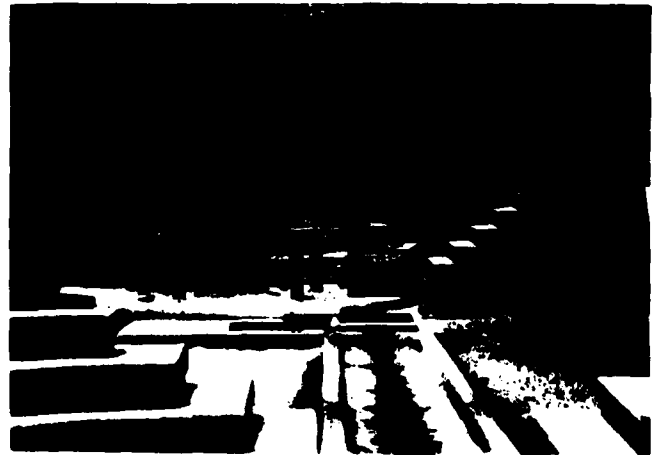
The site is at the edge of Central Park, on a small rise of land. It is surrounded and populated by large mature trees. The only access is from the park side of the playground.

CONCEPTUAL ORGANIZATION

Conceptually, the play area is organized in four concentric zones, the center being the play activity area, surrounded by an edge, a hard-surfaced path, and with the observation benches and fence as the outer ring.

INDIVIDUAL SPACES

As shown in the photographs and the plan, the facility is a series of sculptural play devices constructed of durable materials.



The following activity areas were included in the original design:

- spashing pool
- climbing roof
- water channel
- boat
- climbing poles
- ampitheater
- tree houses
- tree pit
- fortress
- entrance tower
- mound within a mound
- tunnel
- slide
- paddling pools

Several items have been removed like the boat and some items have been added like the slides.

(The park has another play area for younger children just east toward the park entrance. This area was also designed by Richard Dattner. It is much smaller than the Lauder Play Area and contains more conventional play structures and equipment).

OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE

The research team visited the site several times on a sunny Sunday (Father's Day.) Early in the morning (10 a.m.) there were no users on the site. By noon there were a few children each with one or more adults. Most of the children observed were between 2 and 6 years of age. Adults were in all parts of the play area--in the sandy zone, next to the slides, sitting on edges--both as participants and observers.

ASSESSMENT

SITE

The site is different from other Central Park sites. Of the five playgrounds we

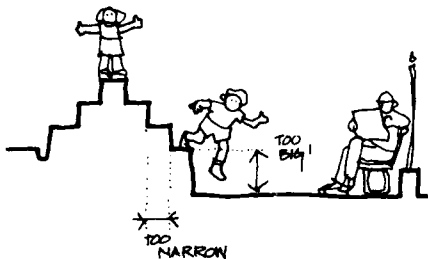
saw, it was the only one located on a hill. All the others were located in low areas, so as you approached them you looked "into" them, not "up" at them. This critic's subjective response is to think that playgrounds shouldn't be on tops of hills.

The site was heavily shaded, perhaps to some disadvantage on colder days.

EQUIPMENT

No movement--no moving or swinging equipment. The lack of swinging equipment seemed a severe deficiency when compared to the other playgrounds.

Relatively few choices of equipment which made the playground very similar to the small Tot Lot Playground next to it. In fact, no school age children were there perhaps because there was no large motor play equipment to initially attract them.



HIGH STEPS NEED SAND



SAFETY

Safety problems were noticed in steps in the splashing pool (see sketch and photo).

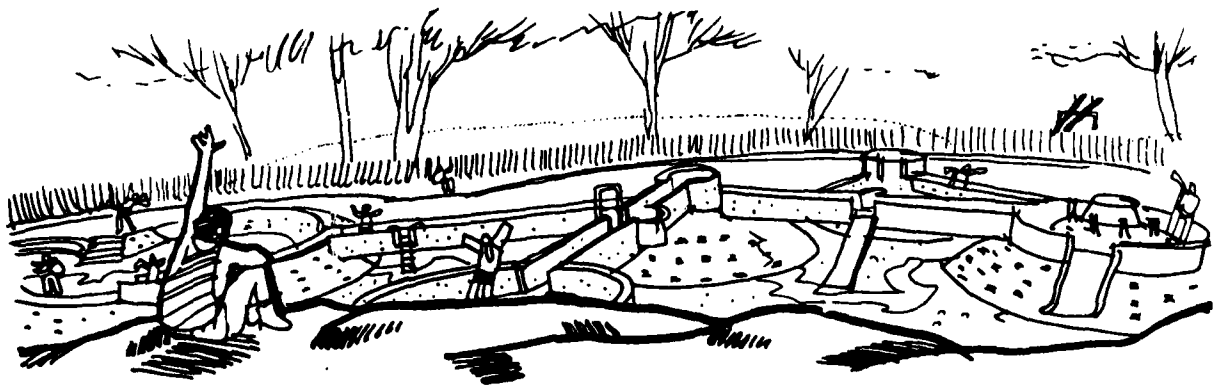
GENERAL

- no provisions to be up off the ground (except in the tree house)
- not next to any ball playing areas. The feeling of isolation is not good. If the playground itself had more open space, it might feel better
- sand is nice (parent)
- no color--the lack of color was a real disappointment especially in comparison to the other Central Park playgrounds
- "What is perhaps missing is the loose building materials that could make the playground really creative."
(About Dattner in Bengtsson (1970))

HECKSCHER FOUNDATION PLAYGROUND

BASIC DATA

Client	Parks, Recreation, and Cultural Affairs Administration, City of New York
Address	Central Park West at 59th Street New York, New York
Architect	Richard Dattner, AIA/New York
Date	1968
Cost	\$250,000
References	<u>Industrial Design</u> , November 1970, 17, 27.



PROGRAM DESCRIPTION

A large existing playground in Central Park that has been updated with several new facilities.

FACILITY DESCRIPTION

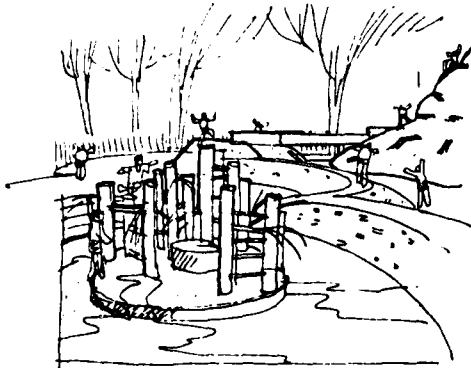
The new facilities at the playground include:

- major water play area
- contemporary play area
- new equipment for a traditional play area

The major features from the previous playground include:

- a pavillion (rest rooms)
- a large ball playing area
- a large (40' high) natural rock outcropping
- pieces of traditional play equipment
- a large paved play area

The water play area is the most unique feature of the playground and deserves special discussion.



CONCEPTUAL ORGANIZATION

The overall design concepts in the water play area were:

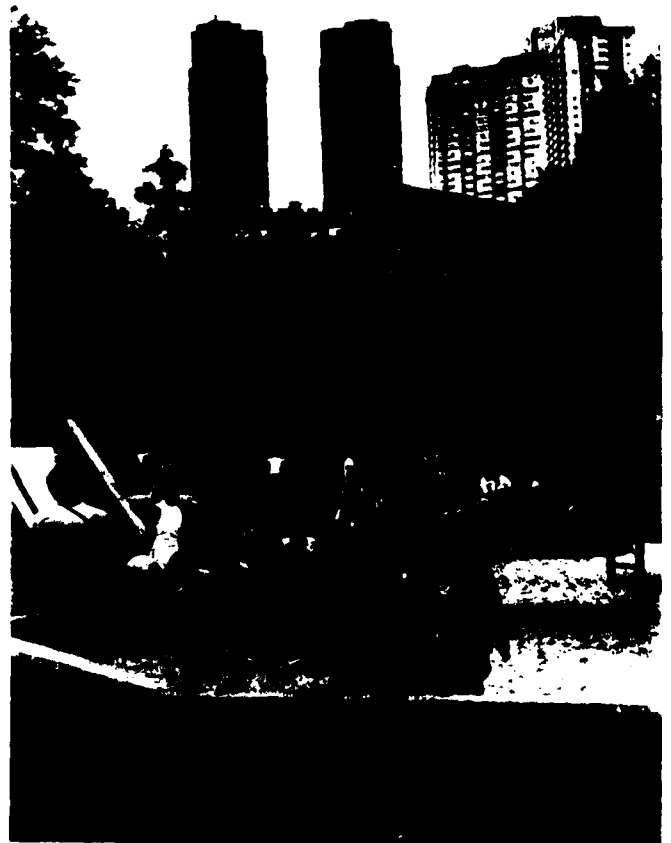
1. Zoning for distributing play.
2. Connection (symbolic and actual) of built play structures with the natural rock formation.
3. Continuity of water flow and related play areas.

ASSESSMENT

While this playground is designed as a major feature in the major public park of one of the world's largest cities, it can serve as a prototype for much smaller places. Many of the elements are done with economy and any place that brings children and adults together at high densities (like a shopping center) could easily justify a water play area.

The major lessons that would apply to much smaller facilities include:

- water play in the sun is fun
- nozzels to spray water (intensity and direction controlled by the children)
- water trough (a river) for water play
- zoned activities for active and quiet water play, and for separation of younger from older children when desired



"Water is seductive," and the playground attracts many children to its four zones:

- sprinkler area (some nozzels are child controllable and directable)
- cascade area
- water flow play area
- quiet water play area

A major insight on the part of the designer is that it doesn't take much water to initiate and stimulate water play. Nozzles, many of which are movable and squirttable, spray water at the child or adult's whim. The cascade does use a lot more water and predictably it is only turned on for special occasions.

The configuration of the water play area, is a series of layers in the following order from inside to outside.

- children's (occasional adult) territory
- edge
- path
- observation area (adults and kids)
- security (fence)
- entry (only one or two playgrounds)

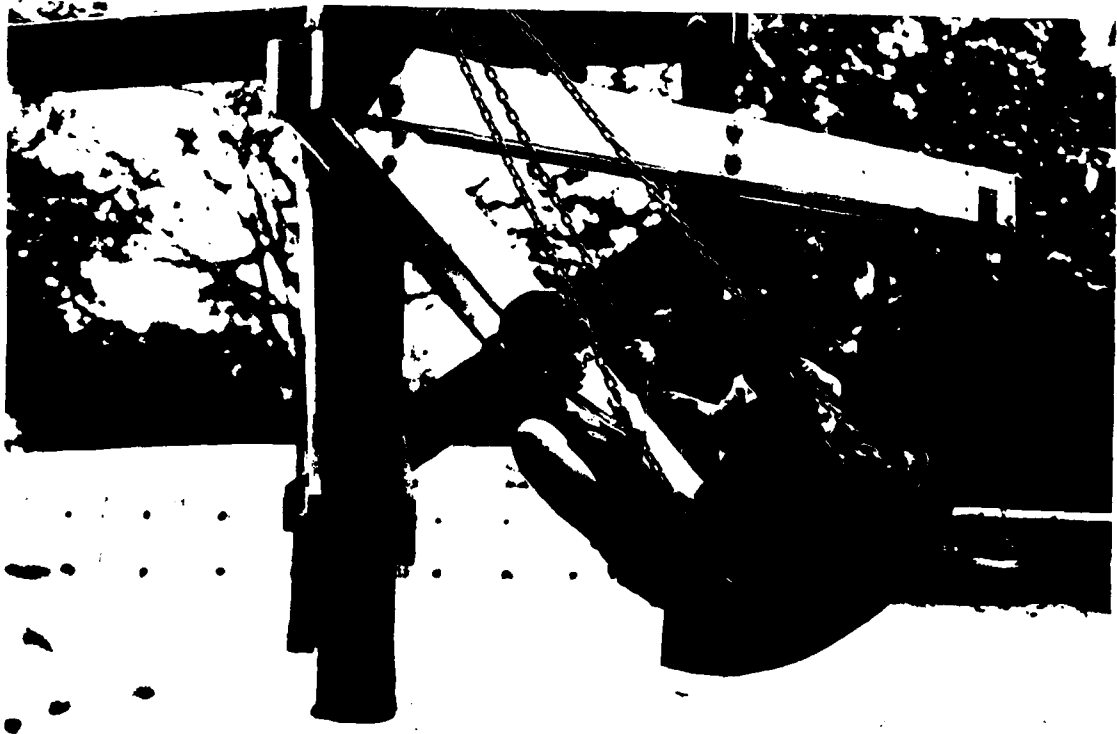
The origin of the water is on the natural rock from which it continues to flow through a system of elevated canals and cascades from one area to another. In addition, there are the independent areas for water nozzles.



ADLER PLAYGROUND

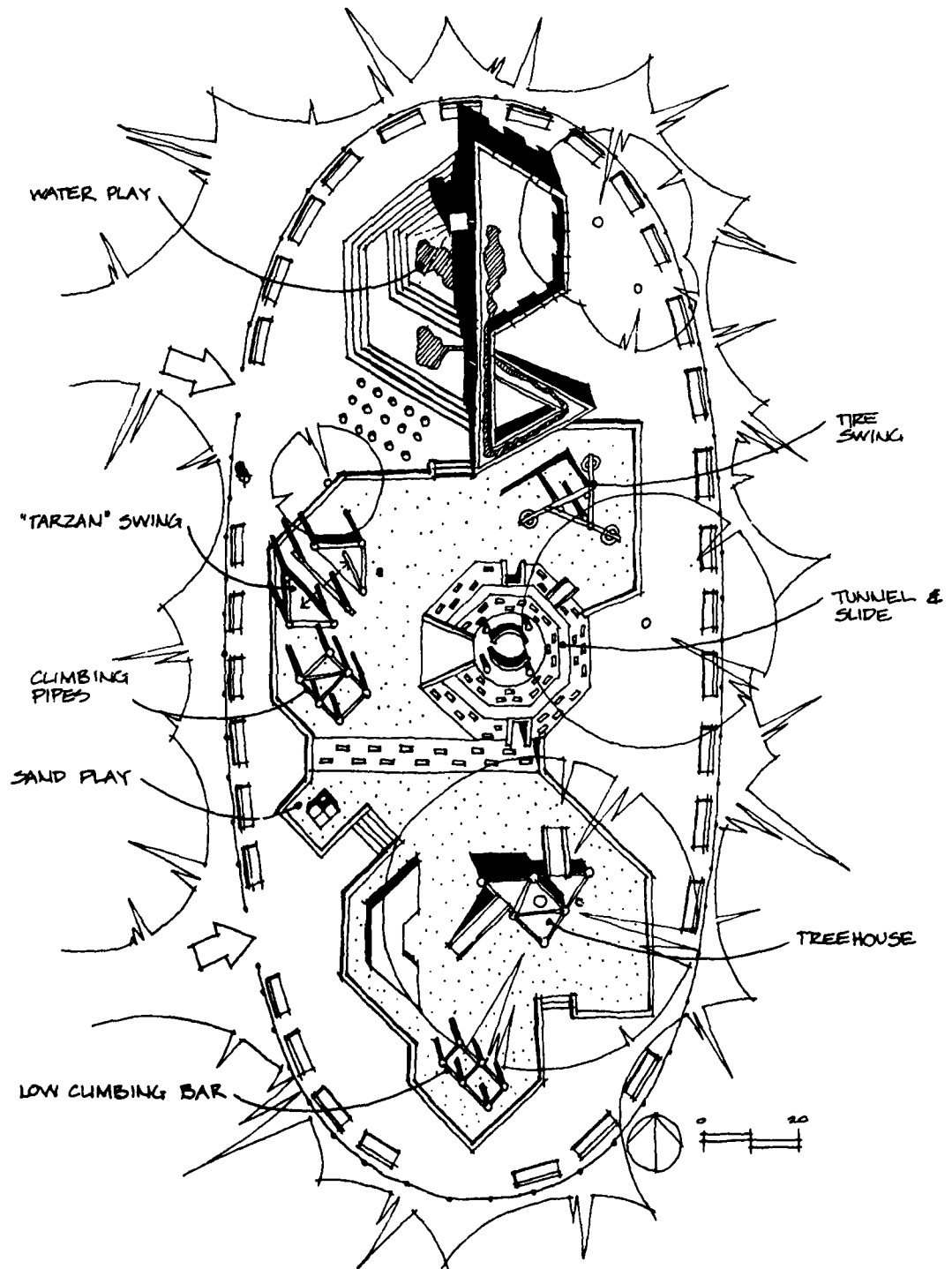
BASIC DATA

Client	Parks, Recreation, and Cultural Affairs Administration, City of New York
Address	71st Street and Fifth Avenue New York, N.Y.
Architect	Richard Dattner, AIA/New York
Date	1970
Users	Children ages , 2 to 8, parents, others
Size	13,000 sq. ft.
Cost	\$120,000. \$9.2/sq. ft.
References	<u>Industrial Design</u> , November 1970, <u>17, 27.</u>



PROGRAM DESCRIPTION

The facility was the third in a series of "new" playgrounds constructed in Central Park in New York. The facility is built inside an existing shell, consisting of a fence and benches, and replaces a conventional play area.



FACILITY DESCRIPTION

This facility is an important variation on Dattner's earlier Lauder Playground (see above case study) and a comparison between the two will help clarify the characteristics of both.

- similar in overall zoning and configuration
- both sited at the edge of the park
- Adler introduces use of color
- Adler introduces moving things including a triple tire swing and a Tarzan rope
- Adler playthings are more obviously made out of wood
- the image at Adler of a playground populated with structures, whereas at Lauder the concrete stone mounds dominate
- the Adler Playground has a clear relationship to a ball playing area; Lauder does not
- both have popular tunnel-volcano-slide combinations



OBSERVATIONS AND INTERVIEWS

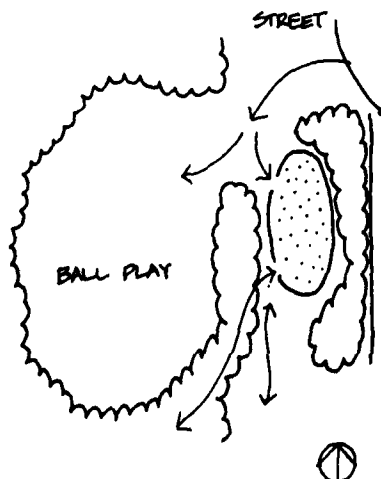
The 1-1/2 hours spent at the playground allowed the team to observe several patterns of use and to pose some hypotheses.

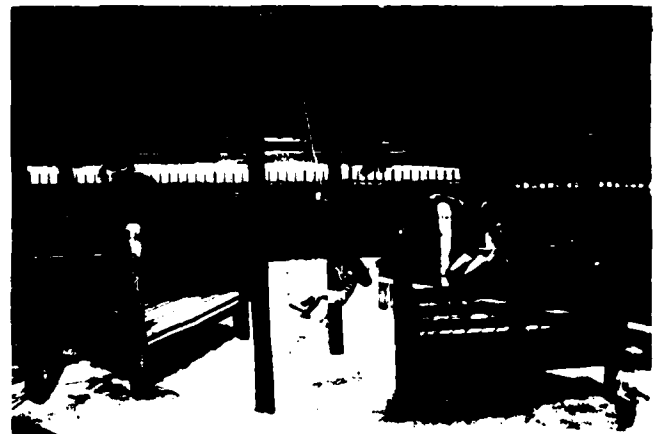
Linked Play--Inside and Out

The sequence of play of one group of children deserves record. The sequence:

Arrival: As a group with parents.

- 1st: Play on the swings (sufficient number of children did this to suggest that dramatic equipment or moving equipment is a touch-stone)
- 2nd: Ropeswing
- 3rd: Play on the volcano-slide
- 4th: Play in the treehouse-slide; at each place as they went along, we heard, "Let's play Star Wars", etc.
- 5th: Water play at bubbler; recontact Dad
- 6th: Play in the open area near Dad
- 7th: Group deteriorates into some quiet play, plus bike riding and taunting of parents
- 8th: Group goes to play in field (30 minutes have gone by); they play various ballgames for 1 hour. (Several other children then came in, played and then went out to the playing field for their own ballgame or quiet play in the dirt, leading to the possible hypothesis that accessibility or linking to other play areas is a critical site development consideration.)





OTHER OBSERVATIONS OF USE

Other kinds of play observed included:



- Parent-child challenge play where the child tried to extend his or her ability to do something like the Tarzan Swing.
- Infants and very young children benefited from the clear definition of sand play spaces and the infants played happily in spaces that looked too tight for them and were not used by older children except as hiding spaces.
- We observed what seems to be a classical parent behavior of parent and child going to the park, where the parents read the New York Times on Sunday morning while the child plays; eventually the child gets bored and tries to enlist participation of the parent--most fail.
- Most parents sat on periphery but some entered the children's domains and helped or participated.
- Ages: most children were 2 to 8 years old.

COMMENTS

- Most users live nearby and walk; some drive but knew the place from formerly living in the area.
- Use varies according to age and stage in life cycle. The dominant activities:

1-1/2 years: sand play
2-1/2 years: slides and sand play
3 to 3-1/2 years: swings, slides, and sand play

We observed 15 children at noon time; parents said there were frequently 75-100 at the playground at peak activity times.

ASSESSMENT

The playground, although it had the same overall size and zoning as the Lauder Playground, appear to be a significant improvement both because of the design changes and additions listed above.

The equipment has held up well and one would not guess that it has been in constant use since 1970.

METROPOLITAN MUSEUM PLAYGROUND NORTH

BASIC DATA

Client	Parks, Recreation, and Cultural Affairs Administration, City of New York
Address	84th Street at Fifth Avenue New York, New York
Architect	Richard Dattner, AIA/New York
Date	1972
Size	22,000 sq. ft.
Cost	\$300,000. \$13.60/sq. ft.



PROGRAM DESCRIPTION

The facility is one in a series of "new" playgrounds for Central Park in New York. The facility serves both the apartment community across the street from it and provides child-oriented space near the Metropolitan Museum presumably as a drop-off space for children who don't want to go inside or for after a museum visit.

FACILITY DESCRIPTION

The Metropolitan Museum Playground is similar in concept, zoning, color, and execution to the other Dattner-designed playgrounds, except for the inclusion of a tot-lot in its overall design, and the addition of more swinging equipment, such as a swinging bridge.



Like the others located near the edge of the park, it is relatively convenient to apartment dwellers, but it is the only facility that is highly visible and has its entrance directly off a main street. This seems to affect the personality of the playground, making its relation to Central Park incidental. It was the sunniest of the playgrounds visited in Central Park. Apparently a lot of trees got removed during construction.

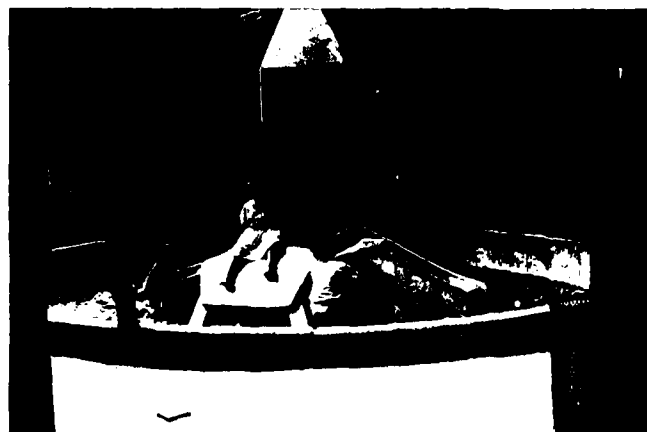
ASSESSMENT

Perceived Size

A change between this design and the other areas is the shape of the playground. The others are oblong while this one is more nearly circular. The effect of this difference is perceived size, at least for the adult. This playground even though it is larger by about 10,000 sq. ft. feels (and is) more concentrated.

Lack of Connection

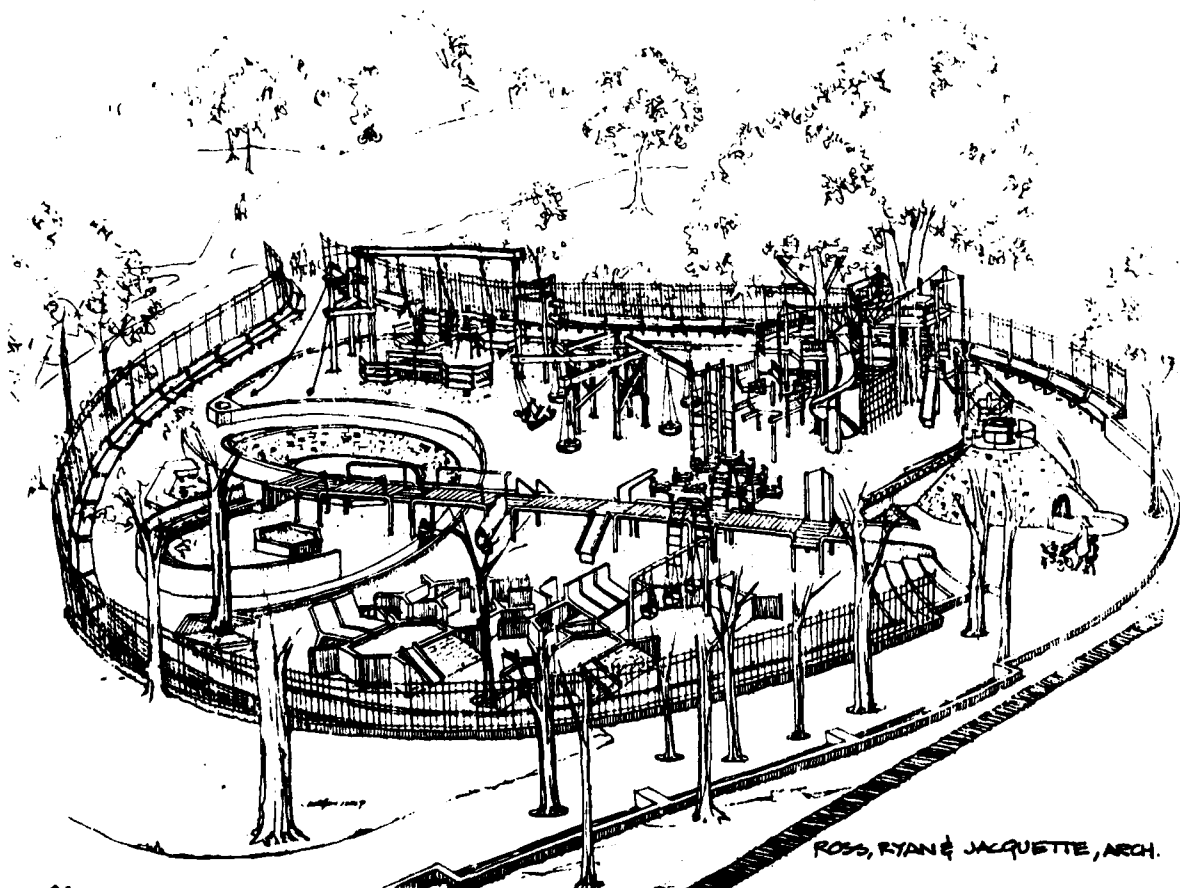
The facility also appears to suffer from isolation. It is virtually surrounded by traffic on two of its three sides and isn't related either by proximity or visual connection to other park amenities, paths, playing fields, etc. The entrance on Fifth Avenue makes its location in the park incidental.



CENTRAL PARK COMMUNITY PLAYGROUND

BASIC DATA

Client	Parents for Improved Playgrounds, Inc. 168 W. 100 Street, New York, New York
Address	100th Street and Central Park West, New York, New York
Architect	Ross, Ryan, and Jacquette Architectural Associates/New York
Date	1972
Users	100th Street neighborhood children and the general public
Size	29,000 sq. ft.
Cost	\$165,000; \$6.60/sq. ft.
People Interviewed	Kenneth Ross



PROGRAM DESCRIPTION

Of the five playgrounds visited in Central Park, this is the only playground whose design included active community input. Parents for Improved Playgrounds, Inc., and the architects--all of whom live within walking distance from the park--worked closely on the design development stage.

Due to active community participation and continuing support from the Lauder Foundation, this park has a summer program manned with CETA employees. The program includes directed sports, free lunches, arts and crafts, and other activities.

Modifications and additions to the equipment are also facilitated by the active participation of the community, according to Kenneth Ross, the architect. "The play area is actually a catalyst for a lot of community action and 'getting together' resulted in ventures such as establishing a community radio station," said Ross.

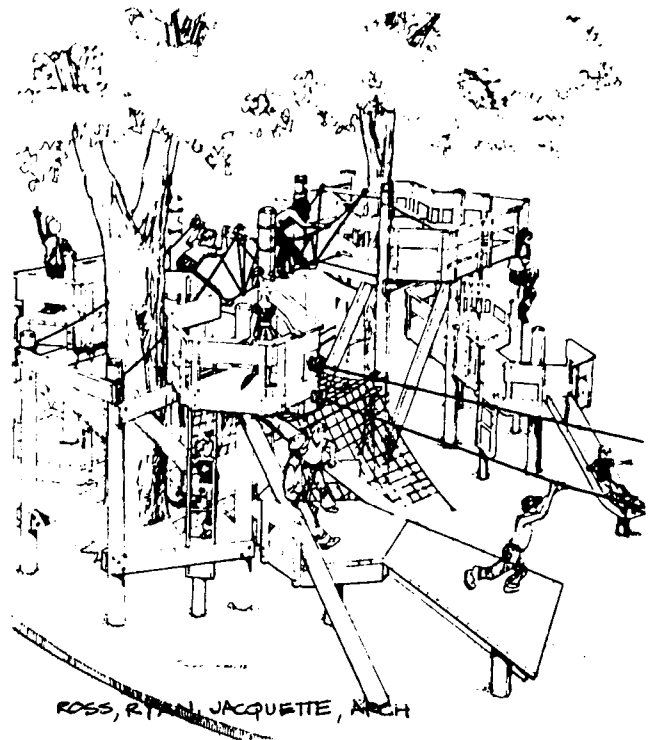
FACILITY DESCRIPTION

The playground is located at the west edge of Central Park at 100th Street, a major automobile entrance to the park. It sits in a hollow backed up to the northeast side of a hill and is surrounded by large mature trees. The entry is on the park side, not the streetside, and views from inside the park past the entry include playing fields and paths leading to other amenities.

The range of swinging and climbing equipment found at the other contemporary playgrounds was also found here, the biggest difference being in the boldness of the individual pieces.

A good example for such area is the tree house. This is a complex of structures that offers climbing, swinging and sliding experiences for the older children.

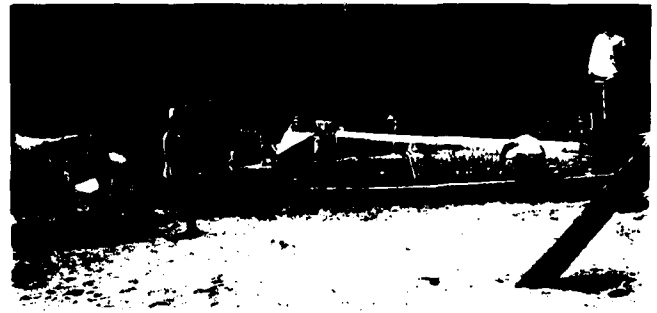
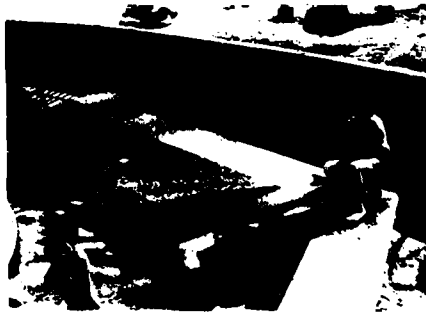
The complex consists of multiple-level platforms of natural wood, connected by a jungle bridge of ropes with cargo nets that hang directly below. Additional features of the tree house complex are a unique spiral slide similar to a department store package chute and fire poles. Attached to the tree house is the pulley-ride that provides the excitement of feet-off-the-ground transportation and is connected to the Tarzan swing at the far end of the play park.



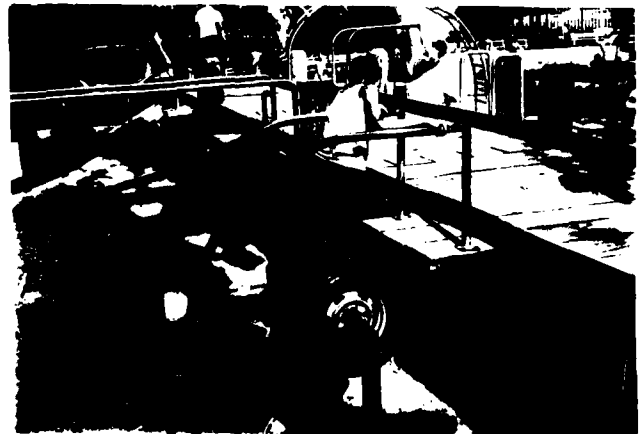
The Tarzan ropes were taller and there were more of them. (Only one is still up, apparently with several ropes kids crash into one another rather than jumping the gap.) The tree house is higher and the bridges are higher than the other Central Park playgrounds.

Zoning is similar and given the drama of the other parts, areas for quiet play are important. One hypothesis might be that major highly populated contemporary playgrounds with lots of action equipment also need dull, ambiguous areas to match the needs of certain kids and the varying moods of others.

The water play area was in full use. Water play is basically "spray play" with the nozzels being child adjustable both in direction and quantity. Interestingly, the adjustments possible are not very great but they appear to bring tremendous satisfaction to the children using them.



A feature of this facility not found on the others is the bridge-causeway which bisects the site. It is fairly high above the sand below, offers a variety of ways to jump off and onto it, and apparently is both long enough and located so it doesn't connect with a "traffic race way" that would encourage running around.

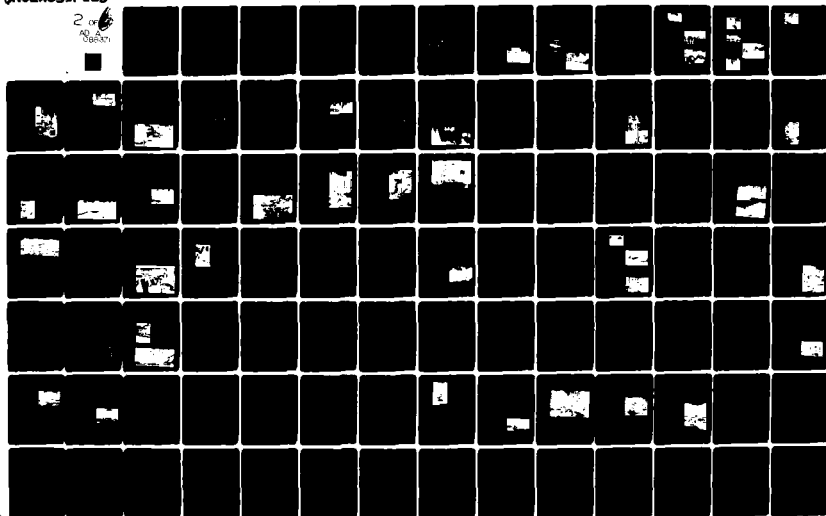


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CASE STUDIES OF CHILD PLAY AREAS AND CHILD SUPPORT FACILITIES.(U)
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ASSESSMENT

Maintenance

This playground appeared to be the worst maintained of the five visited and a variety of pieces of equipment needed repair to put them back in use.

Graded Challenge

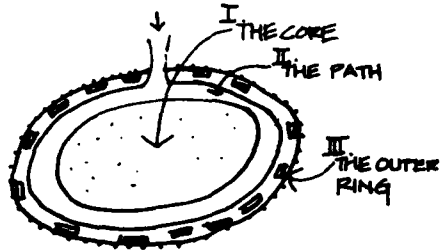
One of the successful aspects of this playground, and in contrast an aspect clearly missing from the oldest playground, Lauder, is a full continuum of varying challenges for children to "grow-into." This playground (and to some extent the Metropolitan Playground) offered many dramatic challenges.

COMPARATIVE ANALYSIS OF THE CENTRAL PARK CONTEMPORARY PLAYGROUNDS

FACILITY DESCRIPTION

CONFIGURATION AND CONCEPTUAL ORGANIZATION

Most sites are organized in a pattern that can be described schematically as three concentric circles:



- the core--the main activity area
- a hard surfaced path--for circulation and wheeled toys
- the outer ring fence and benches--boundary control and a place for adults, rest and observation

Although this organization was inherited from the original, much older playgrounds on the same sites it was not perceived by the architects as a constraint.

The five playgrounds observed in Central Park fall into the category called "Contemporary Playgrounds." They have similarities to traditional, equipment-oriented playgrounds and have swings, climbing devices, slides, etc. They are different from most traditional playgrounds, however, in a number of ways.

- The playgrounds are landscaped with walls and mounds to define zones for different pieces of equipment and types of play.
- The equipment is either custom designed, with wood being the prime building material, or is selected from catalogues that emphasize wood play equipment.
- Water play is included in some way, and more inventive than just squirting people with the drinking fountain.
- Generally, the play areas are much larger, more intentionally designed, but only slightly more expensive per square foot than many catalogue-selected, manufacturer installed traditional playgrounds (especially

considering that the latter do not involve site preparation or labor-- see the "Big Toys" Case Study.

Several pieces of equipment not usually found in traditional playgrounds tend to show up over and over:

- Paved mounds for climbing and sliding
- Tree houses, platforms above the ground, and bridges
- "Tarzan" swinging ropes
- Group tire swings
- Stepping stones or step pyramids

OBSERVATIONS AND INTERVIEWS

The five play areas were visited and observed by the research team during a typical weekend summer day. The duration of the observation and the sample size in the case of interviews do not allow for authorization or generalizable findings. The following observations are, therefore, limited and probable causes should be further studied.

- The Lauder play area was observed as the least used area. When it was occupied, most of the users were of younger age, and almost without exception were accompanied by parents.

Possible causes for the under utilization of this area might be its static character (no moving things, and the water in water-play area being turned off).

- The Adler play area was used more heavily, especially towards noon time.

Being conceptually close to Lauder, the difference might possibly be attributed to the larger number of dynamic activities and less rigid and more colorful equipment; the difference might also be due to the different populations in the play area's immediate neighborhoods.

- The Metropolitan Museum play area and the Heckscher play area were moderately busy. The Heckscher specialized water play area was somewhat quiet considering the hot day and the time of the visit (3:30 p.m.).
- The Community Playground on 100th Street was the most crowded area.

Possible contributing factors are the dynamic character of the equipment (despite some disrepair), and the socio-economic status of the users, who might have greater dependency on outdoors and public facilities for recreation.

ASSESSMENT

The pattern of use observed on the Central Park Playgrounds is of some interest when it is juxtaposed to other studies of playground use (Rothenberg, Haywood, and Beasley, 1975; Clay, 1972) which suggest that playgrounds in general are used only 5% of children's total time out-of-doors. The implication is that anyone interested in children's play should examine how children use their time and plan to support other aspects of their time beyond the 5% that playgrounds represent.

On the other hand, percentage of time spent at playgrounds may not accurately reflect the importance of "Play Areas" or "Kids Places" in the children's overall developmental process. During the site visits in Central Park it was observed that the average visit lasted 15-20 minutes followed by as long or longer period of play in the field near the playground. This suggests three hypotheses:

1. That playgrounds at suburban Army Bases will probably look empty much of the time.
2. That short duration of use does not reflect the importance of the playground to the child. Even young children test their ability to break away from their families and assert themselves

as individuals. The playground is their territory away from their parents and provides a place to assert some independence. This assertion is not dependent on the the amount of time spent there.

3. The "play" that the play area generates includes play on the way to and from the area and play in the play fields next to it.

MAINTENANCE

While two of the playgrounds are over 10 years old and the newest is six years old, they basically do not show their age. Only the Lauder concrete work and some of the community-built parts of the 100th Street playground show the ravages of heavy use.

The choice of very large durable wooden structures and the mixture of paved and sand areas has apparently been appropriate, and if not easy to maintain, at least maintainable.

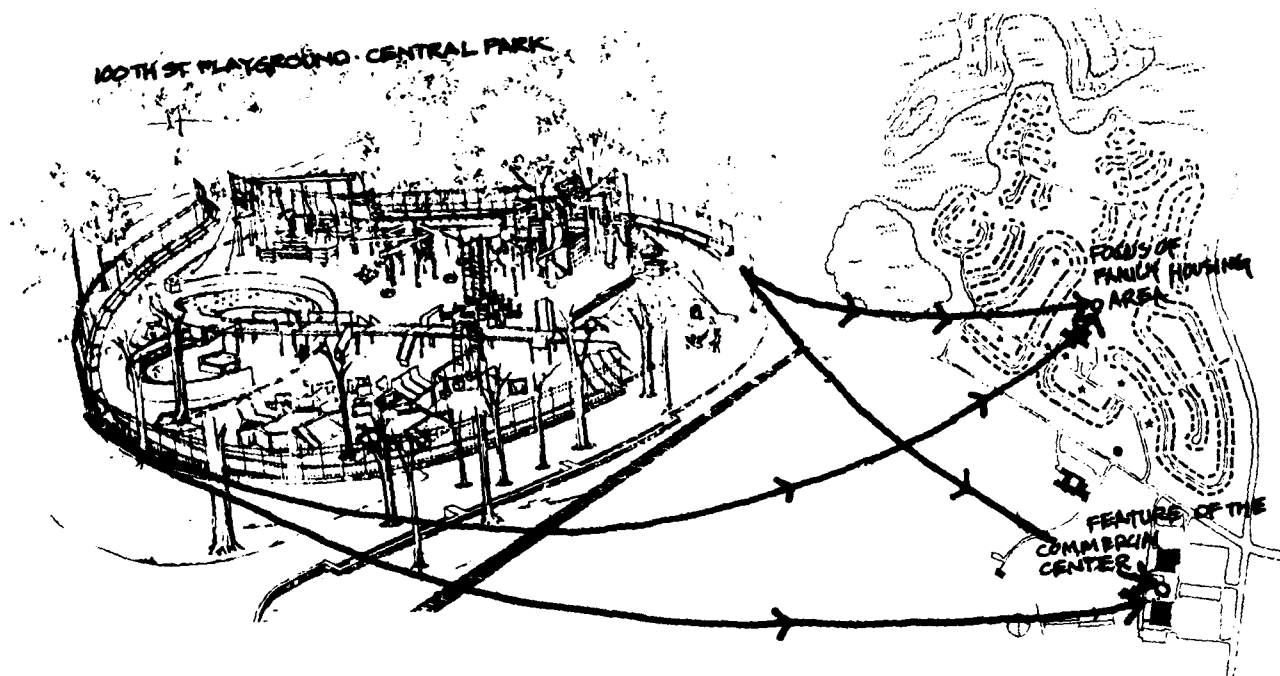
Of the facilities emphasizing color, Adler, Metropolitan and Heckscher still look bright. If they have been repainted, someone went to the bother of getting paints that were bright. Usually the colors used by maintenance people when repainting are very dull and show the effects of institutional standards.

CONCLUSIONS

APPROPRIATENESS TO ARMY BASES

The \$300,000 cost for a 1/2 acre playground is startling, especially if one lives in a suburb and backyard swing sets appear to solve children's recreation needs. The Central Park area of Manhattan has a very high density and although many are adult families without children, the number of children within the vicinity of each park is very high. Since Army Bases don't fit this pattern, are these playgrounds a reasonable prototype for children's play at Army Bases?

The answer is yes in several ways. First, while the kind of expenditure they represent wouldn't be appropriate for family housing areas, there are places on bases where many people congregate. These include recreation and commercial areas. For instance, an ambitious playground design as the focus of a "mall" that connects the PX, Commercial Bank, and other commercial and recreational activities at Fort Meade, Bolling Air Force Base, or Fort Lewis would probably get enough children on bikes or shopping with parents, and enough special use for art shows, music, etc. to justify its use.



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Rothenberg, M., Hayward, D.G., and
 Beasley, R.R. Playgrounds: for whom?
 In Carson, D.H. (Gen. Ed.) Man Environment
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 Dowden, Hutchinson & Ross, 1975. Pp. 121-130.

CHILDREN'S VILLAGE IN ONTARIO PLACE

BASIC DATA

Client	Ontario Place Corporation, Government of Ontario
Address	955 Lakeshore Boulevard West Toronto, Ontario M6K 3B9 (414)965-3737
Director	Nevin McKeown, Manager of Site Operations
Designer	Eric McMillan/Toronto
Planner	Craig Zeidler Strong/Toronto
Date	1972-74
Users	The general public, children 4-14 years
Size	2-1/2 acres in a 96 acre leisure park
Cost	\$770,000 (Canadian); \$300,000/acre
References	Canada's fun village: Ontario Place. <u>Design</u> (London), February 1973, No. 290, 48-51.
People Interviewed	Nevin McKeown, Manager Eric McMillan, Designer

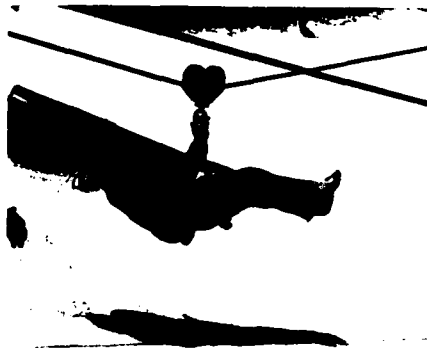


PROGRAM DESCRIPTION

Children's Village is one feature of Ontario Place, a permanent leisure park and exposition-entertainment facility for Toronto and the province of Ontario. Children's Village is an important facility attracting children and families on its own. There are two main areas, a water play area and a tent-like structure containing about 30 specially designed pieces of play apparatus called the land play area, including an area for pre-schoolers.

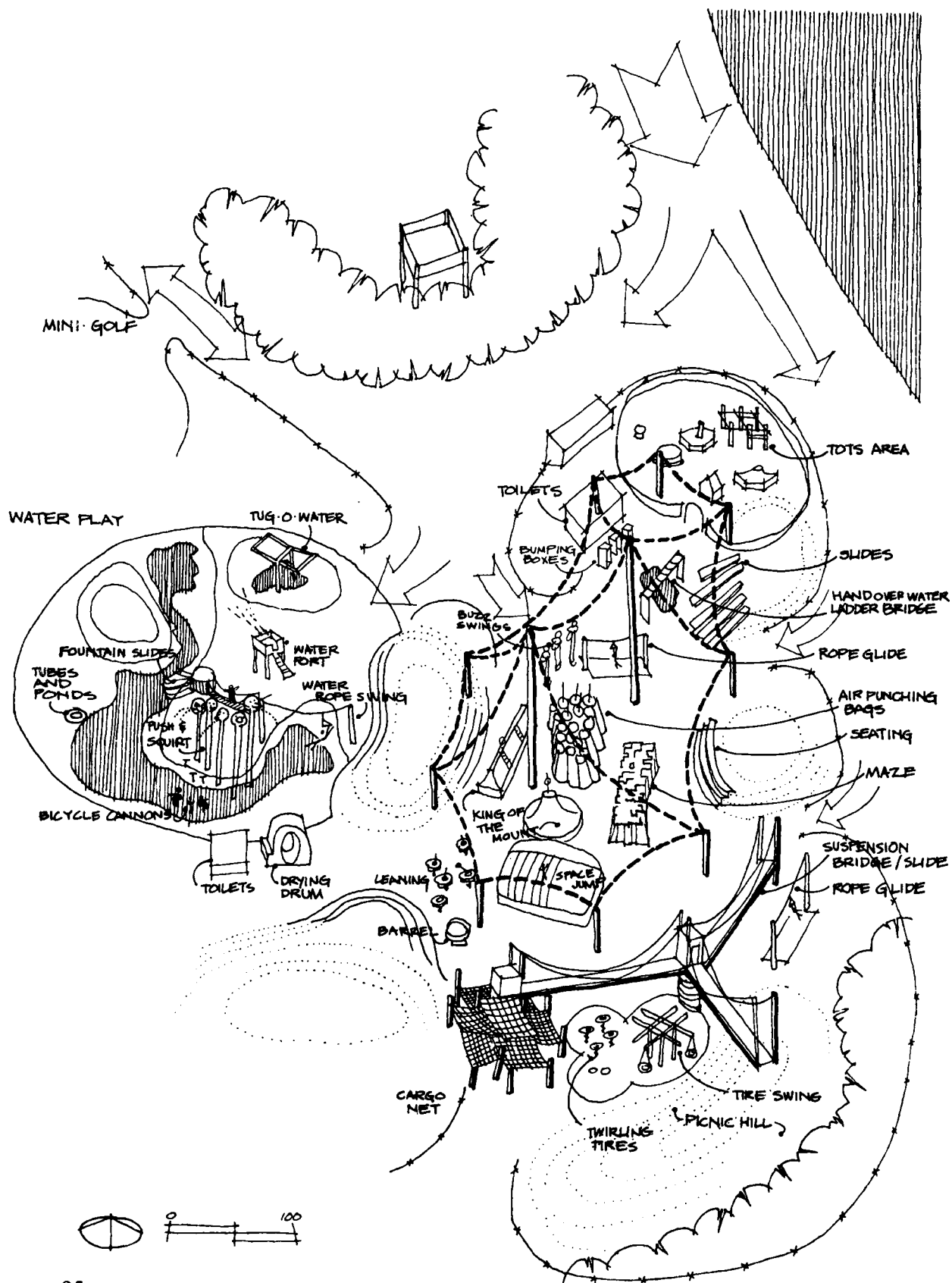
The concept behind the place is to attract children with a variety of pieces of experience, sensual, and large-muscle-oriented play equipment. The park charges admission (\$2.50 for adults, \$1.50 for unaccompanied children, and \$.50 for accompanied children); all events are then free.

FACILITY DESCRIPTION



A mimeographed public relations release describes the facility as follows: "Children's Village, a two-acre playground which has attracted world wide attention, is for children between the ages of 4 and 14 only. Opened July, 1972, it consists of two main areas. Landplay is a 40,000 sq. ft. activity area protected by a brilliant orange canopy. Hand Over Water, Punch Bag Forest, Moon Walk, and King of the Castle are just some of the activities that delight young-

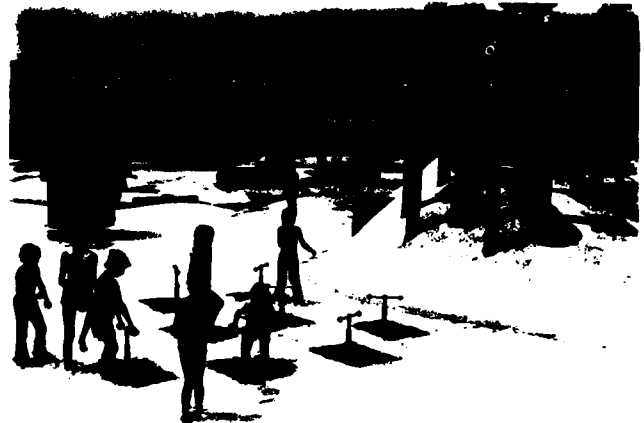
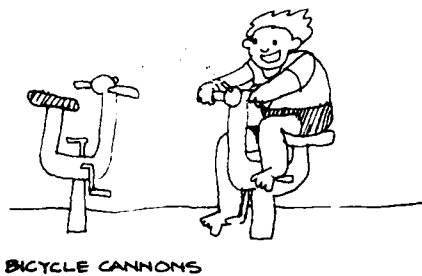






sters. There is also a special play area just for pre-schoolers. This newly expanded area includes a "Jumping Jack", tube slides, swings, King of the Castle, and a playhouse. Waterplay, which opens each year in mid-June, is a 65,000 sq. ft. unique three-tiered funland offering more than 15 water games that magnify the glories of the water pistol, garden hose, and the old swimming hole. A giant bird-shaped walk-in dryer delights the children."

The following photographs document several of the major pieces of landplay and waterplay equipment.



ELEMENTS AND FURNISHINGS

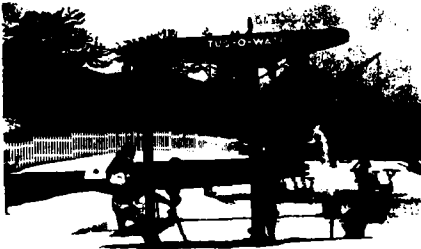
Costs

The King of the Castle device cost \$15,000 for the large one and \$4,000 for the small one for preschoolers including fees. The overall Children's Village cost \$300,000 an acre.



Popularity

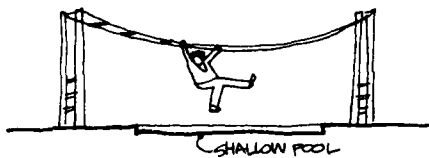
The air mattress Walk in Space is the most popular single event, according to the Facility Manager, although the children clearly explore most of the equipment while they are there. The water play area is equally popular. The least popular is the maze.



Handicapped Access

Although the whole facility is designed to attract active, mobile children looking primarily for challenges, there were wheelchair visitors. Preplanned group and programmed use especially during the school year makes the facility available to special groups.





Clear Accomplishment Points and Graded Challenge

Many events have clear accomplishment points as their feature. Some require cooperation; others stimulate competitiveness. Symbols and imagery is deemphasized and all the activities are free.

There are bigger and smaller versions of most of the equipment (with tiny versions in the tots area) to facilitate a self-selection achievement gradient for children with different abilities.

The concept of repetition of similar challenges in play equipment makes self-selection and accomplishment via graded challenge and paced alternatives possible.

THE TENT

The tent canopy is a critical element even in Toronto both for shade and for temporary protection from summer rains and thunderstorms. It is large enough to allow most people to get in out of the rain. It also provides an overall image to a facility that could look like a jumble of very miscellaneous items.

ASSESSMENT

An Amenity for Cities and Large Communities

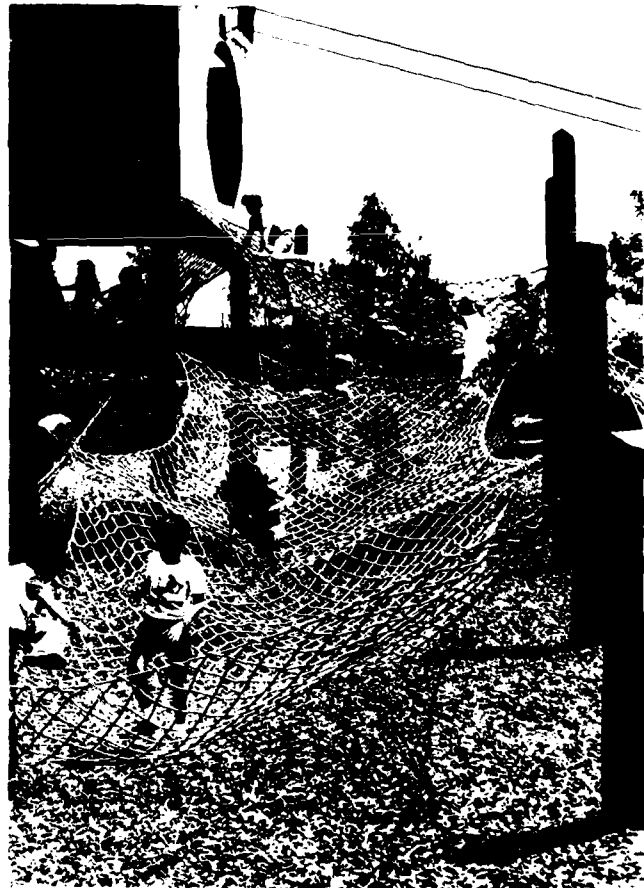
The 50 larger cities in the country should seriously consider similar facilities and program as a special focus of their regional park systems.

The concept could have wider appeal and may be applicable to smaller facilities associated with other attractions like shopping centers. In fact, a franchise of children's playgrounds for shopping centers is being developed. Small indoor facility based on the same ideas could be incorporated as part of shopping centers (Columbus, Indiana) and could easily be developed in conjunction with centralized commercial facilities like the PX, banks, etc., on military bases.

Equipment

The following is a list of comments and suggestions about designing and furnishing this kind of park.

- cargo nets should be nylon with fiberglass joints--other materials may be cheaper but they don't last, splinter, and are more expensive in the long run
- wood chips should be placed over sand because the sand gets into the childrens' clothes and grinds both the finish and the actual equipment--wood chips soften with age



Appeal of the Facility

Children's Village provides a very appealing and memorable experience for its visitors. It is sensitively done and has been thought-

ful in providing experiences for children and places for adults to view and enjoy the activities.



Entropy

If there is a problem, it centers on the tendency of places to lose their original punch as they get remodelled and maintained over time, and as other people, interested and concerned, have their impact on the program and facility. For example, a chain-link fence (with provisions for a barbed-wire top) now greets the approaching visitor from the main entrance. Is it an affordable and practical solution to a crowd control problem or is it a basic affront to the integrity of the whole facility and the intentions and success of its original designer?

Over time this vital and stylish place may become an old thing incapable of maintaining its vitality, newness, and attractiveness. Luckily, after six years it still has much of its original freshness.

FREEWAY PARK

BASIC DATA

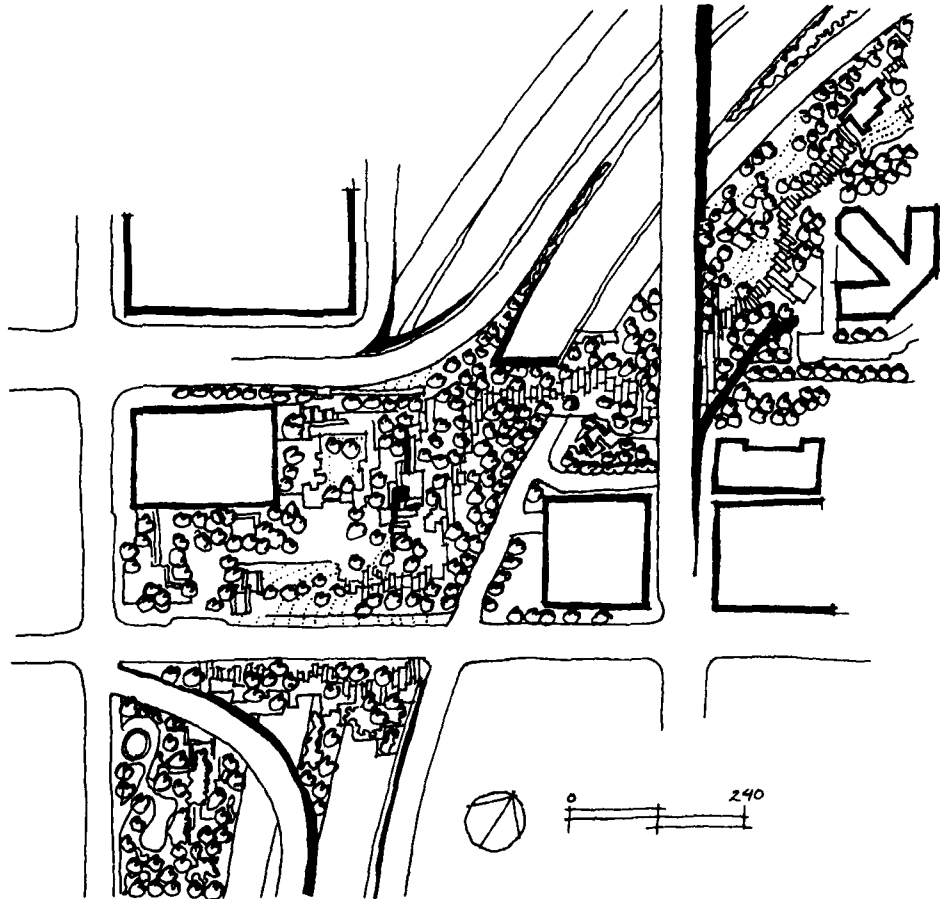
Client	City of Seattle
Address	Atop Interstate 5 between Seneca and University Streets (Downtown) Seattle, Washington
Architect	Lawrence Halprin and Associates/San Francisco (now CHNMB Associates); Angela Danadjieva, Project Designer; E. Byron McCulley, Project Manager
Date	July 4, 1976
Users	The children and adults of downtown Seattle and neighboring First Hill residential district
Size	5.4 acres
Cost	\$3.5 million including all park features, 3990 cu. yds. of concrete, fountains, and piping. \$648,000/acre.
References	Green lid for I-5. <u>Progressive Architecture</u> , June 1977, 58(6), 86-87. 5.4-acre park straddles downtown Seattle freeway. <u>American Institute of Architects' Journal</u> , October 1976, p.10.



FACILITY DESCRIPTION

CONCEPTUAL ORGANIZATION

A 5.4-acre urban park spanning an 8-lane major interstate and commuting freeway in the downtown of Seattle. The park provides the city with a green network of play spaces, waterfalls, pools, gardens, trees, and lawns. The park curves across the freeway from the Park Plaza office building past several sets of high rise apartment blocks, to a residential area, First Hill, to the north-east.



Access

Access to the park is from four walk and stairway entrances on the downtown side and across an unplanned stretch of land from the residential district.

Central Focus

The central focus is a waterfall/cascade/canyon on the downtown side. Concrete formed into step for pools of water, for walkways through the waterfalls, and for informal seating has been sculpted into a major urban experience. A central, circular walkway leads to the bottom of a 33-ft. canyon where the sound and spray of water completely masks the noise and pollution of the freeway. Surrounding the canyon and other pools is a plaza of trees, gardens, and lawns creating many private places.

Vegetation was selected for pollution tolerance. Expensive, invisible piping delivers water for the falls and vegetation, delivers fertilizer, and insures proper drainage.

ASSESSMENT

This is a very successful urban water park, creating many opportunities and places for residents living in high density. The entire park, and especially the central water area, serves as a playground for young and old alike. Adults and older people are seen to sit on the ledges reading, eating, or just passing the time, while children frolic in the water, scale the canyon walls, and hide in areas of deep vegetation.

The central and most unusual design feature is certainly the "fountain" and its use. An oasis has been created in the center of a city. The trees and flowers are beautiful and enhance the unity of the park. The four or five major functional areas seem to attract slightly different people.

CONCLUSION

This park is marvelous for adults, teenagers, and elementary age children, but not especially for very small children. It is very re-

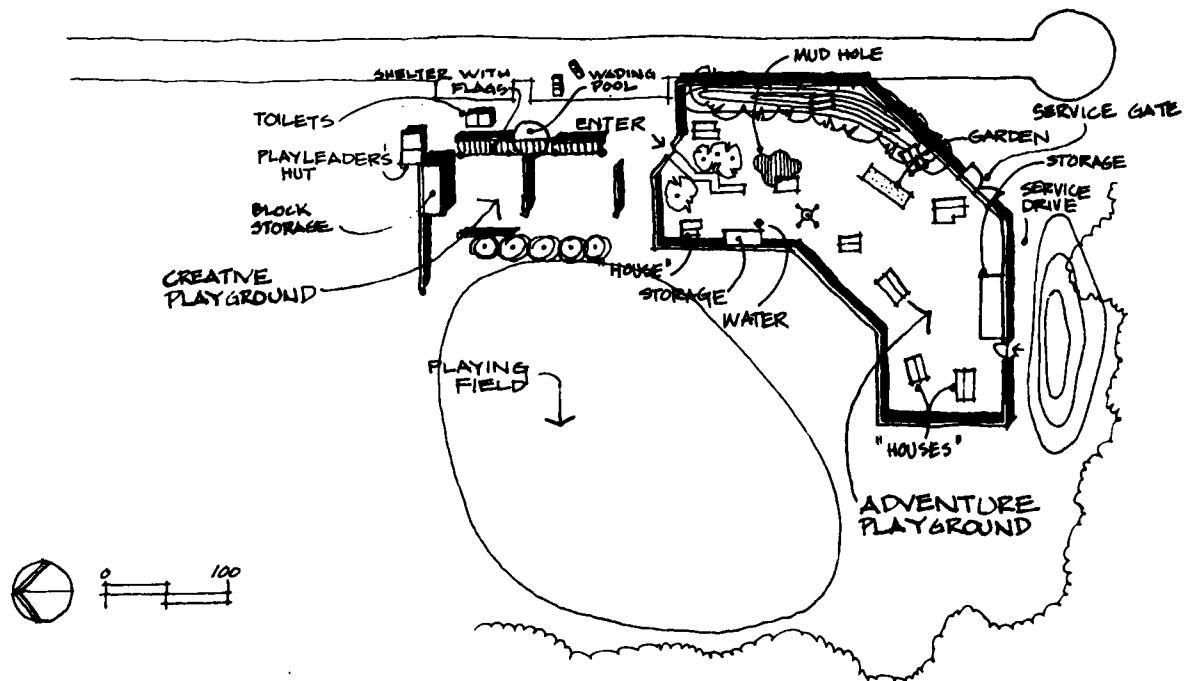
laxing, and does cut off the freeway noise. It contrasts well with the rest of the city in that it has a relaxed landscaping that meanders over a reasonable distance allowing people to not feel hemmed in. The terrain varies nicely and it is exquisitely detailed. The canyon, pools, waterfalls, and ambient noise provide a lively focal point. One can easily move away from this area to more restful spaces. It has at least 5 major "places" which give variety and interest to the scheme. It is exceptionally good landscape architecture.



HARBOURFRONT ADVENTURE AND CREATIVE PLAYGROUNDS

BASIC DATA

Client	Parks and Recreation Department, City of Toronto
Address	Harbourfront Park Toronto, Ontario
Director	Michael Moffat
Landscape Architect	Bill Rock/Toronto
Date	1974
Users	Creative Play Area 11-6 yrs. Adventure Play Area 6-16 yrs.
Size	Creative play area 1/2 acre Adventure play area 1-1/2 acre Open field and residual 2-1/2 acres
People	Bill Rock, Landscape Architect
Interviewed	Several children



PROGRAM DESCRIPTION

Harbourfront Adventure Playground is one of about 25 child built playgrounds in North America and was one of the first adventure playgrounds in Canada. It is typical of other adventure playgrounds in that it is a program with a director who supervises and encourages a variety of activities centered around the building or making of things, especially "houses." The philosophy is that it is important to let the children be in charge of how they use the playground. An adventure playground is a "fertile terrain" full of loose materials and opportunities for play. The children build their own structures. Water is provided. Access for a truck to deliver donated materials is important. Harbourfront Adventure Playground is atypical in that it is not located in direct proximity to a housing area and is somewhat isolated because it was first built as an experimental demonstration project on National parkland. Still, it has the regular play components associated with a loose material, building-oriented, work-yard playground.

The Creative Playground is the only one of its kind in North America. The philosophy is the same as for the Adventure Playground, but the children tend to be younger, and the materials are a modular set of blocks with which the children can build without tools.



FACILITY DESCRIPTION

The 4-1/2 acre site has three areas: an open playing field of about 2 acres, the two play areas, and residual areas.

The enclosed area of the Adventure Playground is about 1-1/2 acres, surrounded by a fence. Its overall configuration is an "L," with an elongated hill on the east side along the fence. Most construction activities occur along the periphery.

The Adventure Playground includes several sheds backed up against the wall for storage of lumber of various sizes. The yard had the appearance of a disorganized lumber yard. Of special note is this appearance, which is messy and apparently disorganized by adult, aesthetic tastes, but the children seem to never remark on this and enjoy the chaos. In addition, there are gardens and garden plots, old clothes for make-believe play, paint, etc., and space for fire play.

Adjacent to the north of the Adventure Playground is an open 1/2 acre Creative Playground. This is an area furnished for a creative play program, and includes hollow, modular building blocks, ladders, planks, and boxes, all of which can be moved by pre-school children, as well as various arts and crafts materials and equipment, a wading pool, a large storage building for the blocks and equipment, and a toilet.

OBSERVATIONS AND INTERVIEWS

COMMENTS FROM INTERVIEWS

From an interview with Bill Rock:

Funding Playleaders vs. Funding Equipment

Adventure playgrounds are difficult to develop as a part of a park system because the administrative preference of most park systems' administrators is to spend \$20,000 on five pieces of equipment rather than on the salaries of 5-10 aides for the summer (a typical playleader budget for 5-10 aides would be \$20,000 for three summer months or \$2,000 per person).

Security

Adventure and creative playgrounds need security and containment from the very beginning. Otherwise, donated materials get stolen and strewn all over the area. They need to be in a contained area to control the risk of unauthorized and unsupervised use and minimize the aesthetic problems of their appearance. Children need to be able to feel assured that if they come back that their work will still be there. Thus the whole area should be enclosed to define a territory for the playground.

Location

The location of the Harbourfront play areas isn't really ideal for a community although it has operated successfully for four years as a national demonstration project. It is too isolated and should be much closer to housing.

Size

The 1-1/2 acres for the adventure play area enclosed by a fence and the 1/2 acre for the creative play area are good workable sizes for programs in an urban area.

Capital Investment/Operating Cost

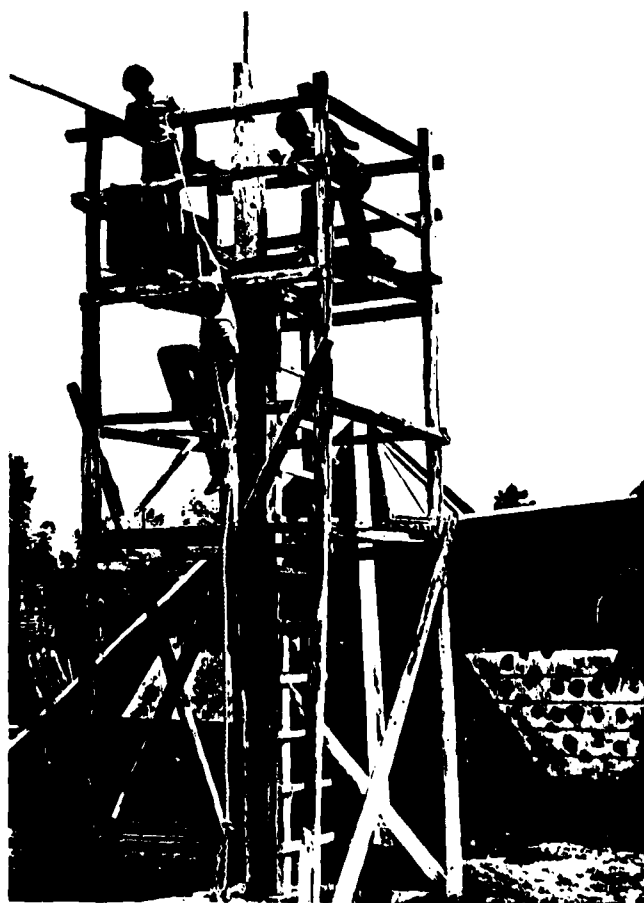
The capital investment cost of adventure playgrounds is actually quite low. They need a fence, high quality tools (cheap tools are more expensive in the long run because they don't last), loose and donated materials that need to be picked up, a pick-up truck--all basic for an adventure playground.

The major operating cost is the salaries of the playleaders and their staff.

From an interview with a group of 6-12 year old children about Harbourfront Adventure Playground:

Good aspects of adventure playgrounds include that they are a good place:

- to be with friends
- to do active stuff-build stuff
- to spend a long time
- to use in winter as well as summer
- to do fire play and water play
- in addition, friends cooperate and no one bosses you around



Quotable Quote

"The whole community is the kids' playground and not any one part. Kids even get bored with adventure playgrounds."

OBSERVATIONS OF USE

Kinds of play that should be "designed" for in an unobtrusive way include fire play, water and mud play, growing things, social play interaction and cooperation in building, gardening, dressing-up creative play, painting, and other "creative" opportunities.

An adventure playground even gets used in the winter and it has a special potential as a drop-in center and a meeting place from where children do other activities.

The fence is important for aesthetic reasons and performs as a visual block and a symbolic barrier and can be climbed easily over or under by children and adults.

The individual houses the children build have locks and secret entrances and children at Harbourfront regularly break into each other's houses while the others aren't there to get communal nails, hammers, supplies, etc. The houses are also torn down periodically to encourage a "fresh start" and allow new participants to come into the area.

ASSESSMENT

Harbourfront Adventure and Creative Playgrounds are used and appreciated facilities even though not optimally located. Adventure playgrounds elicit strong positive support from the children who use it exactly for the reasons some adults reject it--"fire, mud, messy . . . ours." Creative playgrounds offer the same opportunities without tools or fire but with all the other social, intellectual, and physical challenges for younger children.

HUNTINGTON BEACH ADVENTURE PLAYGROUND

BASIC DATA

Client	Department of Parks, Recreation, and Human Services City of Huntington Beach
Address	Gothard and Talbert Streets Huntington Beach, California 92648 (714) 848-1794
Director	Paul Burton
Date	1974
Users	Children of upper-middle class neighborhoods, 6 to 17 yrs.; mostly white; 3:2 ratio boys to girls
Size	2-1/2 acres in an 11 acre quarry
Cost	Not available
References	Vance, B. <u>U.S. Adventure Playground Report. Huntington Beach, CA.: American Adventure Play Association, 1978. Pp. 38-40.</u> Come play in our yard. <u>American Adventure Play Association Newsletter, Fall 1977, 1 (4), 5.</u> Adventure playgrounds appeal to kids imagination. <u>The Milwaukee Journal, August 10, 1976, p. 5.</u> Adventure playground proves great success. <u>California Parks and Recreation, June 1975, 19-21.</u> Adventure playground a trend-setting success in California. <u>Western Leisure and Recreation Association Bulletin, September-October 1975, 5.</u> Catching on in the West...the adventure playground: it's a new kind of park. <u>Sunset Magazine, October 1975, 88-89.</u>
People	Paul Burton, Director
Interviewed	Sue Carper, Playleader Several groups of children

PROGRAM DESCRIPTION

History

Probably the best known adventure playground in North America, the Huntington Beach Adventure Playground, was developed after a lecture visit to the U.S. by Drummond Abernethy, the head of the Children and Youth Department of the National Playing Fields Association of England. It was conceived and developed by Bill Vance, the Supervisor of Recreation for the City of Huntington Beach, and later the founder and first president of the American Adventure Play Association.

Begun in 1974, it is one of the two longest continuously running adventure playgrounds in North America. (For an introduction to the concept of adventure playgrounds, see also the Irvine Adventure Playground case study.)

From the U.S. Adventure Playground Report of 1978: "Agency staff, noting that local children were spending an inordinate amount of time in a local, abandoned, city-owned gravel quarry, elected to staff the site, solicit raw materials for the children's use, and establish it as a local playground. 'The Pit', as it came to be known by local children, was immensely successful from the start. It has been the most popular playground in town."



PARTICIPANTS

The children who frequent the Huntington Beach Playground are mostly from upper-middle class suburban families, though some come from an immediately adjacent lower-middle class neighborhood. They are mostly white with some Hispanic and Oriental; between 6 and 17 with most being 8 to 12 or 13, in a ratio of 3:2 boys to girls.

The staff includes one director and two playleaders, with a minimum of two staff on the site at all times. Preference is for a male-female team. One playleader has a B.A. in recreation, but no formal training is required, though extensive informal experience with children is necessary.

Most children bike to the site from 1 to 2 miles away. Despite its longer distance from most Huntington Beach residential areas, attendance at the playground far exceeds that of conventional sites, the nearby park and tot lot, etc. Heavy media attention given the site attracts families from long distances who then spend entire days at the adventure playground.

The playground is open in the "winter" months from 3 to 5 p.m. on weekdays, and in the summer and on weekends year-round it is open from 11 a.m. to 6 p.m. Since California's Proposition 13, admission has had to be charged at \$.50 a day or \$15.00 for a summer pass, and efforts have been made to publicize the playground in local schools. To increase participation beyond the typical 100 to 200 children who use it in a day, the staff also plans to get teenagers involved as volunteer leaders, to begin evening teenage activities like music, to actively encourage more girls, and to get parents more involved with bigger construction projects.

PROGRAM PHILOSOPHY

The basic philosophy is to provide a rich, varied, exciting, and infinitely challenging setting, and to allow children to play as they wish. As they reach out for new things to do, or appear ready for new developmental challenges, the staff may help out, but there is a firm belief at Huntington Beach--in the tradition of Bill Vance, its first director--that children make their own opportunities and reach out for new challenges when and only when they are ready (this is completely consistent with the research and theory of Piaget) and that staff are only guides or older brothers and sisters, not leaders or "teachers." Respect for other people and respect for the natural environment are values held high, nevertheless.

The children consider that the most important aspects of the way things are run are the following:

- having a place of their own
- not having adults tell them what to do
- being in a natural environment
- learning how to work together, all ages working together, and girls doing the same as boys



FACILITY DESCRIPTION

Site and Overall Context

This adventure playground is located in an upper-middle class suburban city south of Los Angeles. It is sited in a portion of an abandoned sand and gravel quarry on the edge of the city. Ringed by woods, it is across from a concrete plant, metal yard, police firing range and city park (see photo.)

The playground occupies about 2-1/2 acres of the 11 acre former quarry, other parts of which have now been filled.

The embankment is steep and grass covered for the most part. It is ringed by a chain link fence. The pit is about 50 feet deep, effectively cutting off all views except from the entry. A parking lot for cars is at the top, but bikes are always taken down and parked near the leaders' house. A cozy gravel road winds to the bottom.



CONCEPTUAL ORGANIZATION

The edges of the site feature a steep bluff for climbing and sliding, and heavy foliage and some trees for climbing, exploring, and hiding. The center of the site is dominated by three interconnected bodies of water: a 2 to 3 feet deep swimming hole, a pond with various water plants, and a marsh with ducks, frogs, and a myriad of little creatures.

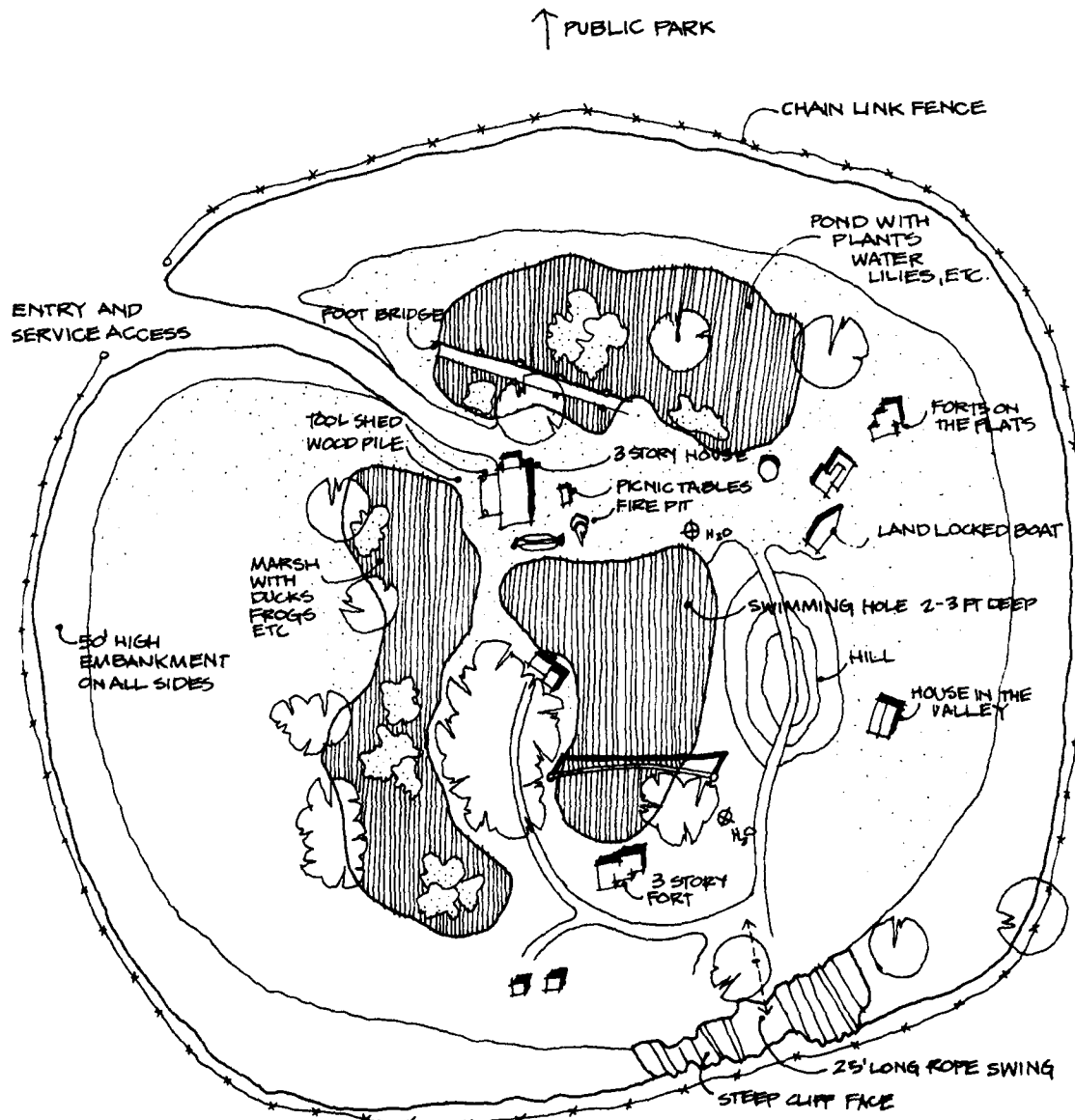
There is also a steep hill in the center of the site and heavy foliage between two of the ponds, together creating a varied and exciting topography.

A 2-1/2 story building was built by the older children with help from the playleaders. It multi-functions as the leaders' base of operations, as an indoor recreation center for the older pre-teenagers, and as a space for bad weather activities. It is centrally located, sturdy, and has a panoramic view of the entire site.



The specific layout of houses, forts, huts, gardens, rope swings, bridges, etc. changes with the children's desires, but some building always appears in the open flats, in the "bayous" between the ponds, on the hills, and in quiet hidden places in and around the ponds. The various areas are interconnected by a complicated series of paths. The site is so complex and there are so many things--both natural and child-made--that it would require weeks of visiting and playing to begin to see it all.

Portable bathrooms, fresh water, a telephone, and overhead lighting from the main house are provided. A full tool shed, first-aid kit, cooler, hot plate, etc. complete the equipment on the site. Material is donated and delivered by local community groups-- construction firms, lumber wholesalers, service clubs, and private individuals; the director also has a van for picking up other necessities.



OBSERVATIONS AND INTERVIEWS

The main activities observed, all self-initiated, were:

- rafting in the water on cable spools
- playing in a boat, trying to get it to float, etc.
- daring each other to jump into the water after running down the hill with more and more speed
- some swimming (discouraged)
- pushing and play fighting at the water's edge
- getting hosed down
- swinging on the 25 ft. rope swing
- warming at the fire pit
- cooking hot dogs with complete dedication
- cooking shoes by mistake
- building houses and forts, or further fixing them up
- exploring water, marsh, and heavy vegetation areas
- sitting in or on houses and watching the boats go by
- quietly sitting by oneself, and so on

All activity was self-initiated. Most was in groups of 3 or 4, usually sex-segregated, though types of activities were not different between the sexes. The most highly



used areas seemed to be the swing, water, vicinity of the main house, the fire-pit, and the forts. Nothing was growing in the garden, and there was very little evidence of recent use of this area. The most highly used environmental features were the water, the loose building materials and tools, the rope, and the fire, in that order.



COMMENTS FROM INTERVIEWS

The children interviewed indicated a very wide range of things they especially liked about this playground, and mentioned how they used it differently from more conventional parks and playgrounds. For example, it was mentioned that they spent much more

time here (minimum of an hour at a time, after coming, even going home for an early dinner and then returning until closing time.) The water area, rope swing, exploring the bluffs, and building activities were clearly the favorite things to do.



Variety and richness of activities, and the possibilities of going into activities in great depth, losing themselves in play and in the environment, seemed to be the main virtues of this playground for the children.

Despite the fact that the playground is much further from residential areas than more conventional playgrounds, all children interviewed indicated playing at both, but clearly this was their favorite. They said the other playgrounds might not be used at all if they were further and this one closer to home.



Perceived Risk

The site is considered a "moderate risk" area by local officials, though interestingly it was a "major risk" when it was an unsupervised, abandoned quarry with a groundwater swimming hole. It has been reported that injury rates are lower or comparable than those at other conventional recreation facilities in the same city. A 1974 study did not find any differences in intermediate and major injuries between several conventional playgrounds and this adventure playground site, but did find a greater incidence of minor bumps and bruises (U.S. Adventure Playground Report, 1978.) Huntington Beach is apparently the only adventure playground in the U.S. which pays an additional premium for the adventure play site over a regular city insurance policy; this, however, is because of the nature of the site (steep bluffs, water) rather than the nature of the activities.

ASSESSMENT

This is a superb playground, definitely deserving every bit of attention and praise it has received over the years. Without a doubt it is one of the best designated playgrounds in the country.

Despite our armchair familiarity with Huntington Beach from reading about it, seeing many slides of it, and hearing stories about it, we were quite unprepared for it. It was overwhelming. "Research" was impossible to conduct, there was just so much to take in. The activities were totally different from those we've seen in slides and heard about, and yet we had the distinct impression that everyday the activities are different from the previous day. Not that the place is at all frenetic or hyperactive, though it is very active and noisy. There is so much to do, the children are busy exploring and creating. The setting itself is rich and varied. It is a kaleidoscope of children, adults, water, sun, fresh air, loose parts, tools, varied topography, freedom and joy. It is a place where native creativity and the innate need to explore are fostered, where adaptation and change happen naturally, and where through it all, child development occurs spontaneously.

IRVINE ADVENTURE PLAYGROUND

BASIC DATA

Client	Community Services Department Recreation Department City of Irvine
Address	University Community Park 1 Beech Tree Lane Irvine, California (714) 754-3634
Director	Steve Sims
Landscape	AR&A Landscape Architects/Laguna Beach Ribera & Associates, Architects/Irvine
Special Consultant	Paul Brady, Assistant City Manager/Irvine
Date	1975
Users	10-15 average at a time on weekdays, 40-100 average on weekends, 6-13 years of age, average 8-9 years of age; 30% girls, 70% boys
Cost	\$56,000 as part of \$995,000 comprehensive community park
Acreage	2.4 acres in a 13 acre park; \$23,300/acre
References	The president's message. <u>American Adventure Play Association Newsletter</u> , <u>Winter 1977 1(3)</u> , p. 1, 3. <u>Vance, B. U.S. Adventure Playground Report. Huntington Beach, Ca.: American Adventure Play Association, 1978, Pp. 42-43.</u>
People Interviewed	Steve Sims, Director Several groups of children Bill Vance, Past-President American Adventure Play Association

PROGRAM DESCRIPTION

As described in a handout for parents and children:

"Adventure playgrounds are designed with an idea of providing children with an opportunity to construct their own playground using only their imaginations, some raw materials, and tools under adult supervision. This concept is just catching on in the United States, but has been popular in Europe for over thirty years . . .

"The most popular activities are the construction of forts and shacks and a variety of climbing, swinging, and crawling activities. Also popular are the mud slide, overnight and cookout type activities."

PARTICIPANTS

On an average weekday after school, 10-15 children of elementary-school age visit the Irvine Adventure Playground. On weekends, 40-100 children attend depending on weather and other activities happening in the community. Ages range from 6 to 13; children below 6 must be accompanied by an older sibling. The average age is 8-9 years. The children are from upper-middle-class backgrounds and travel as much as 2 miles by bike or parent's car, though most come from a radius of 1 mile by bike. Almost all are white. Between 25 and 35% are girls. One estimate is that 47% are from single-parent families. A few handicapped children attend, and mix well, though there are no special programs for them.

The staff consists of a director, 2 to 3 playleaders at a time, plus volunteers (annual staff budget \$15,000 to \$20,000). The Director has a bachelor's degree and is a master's candidate in recreation. The playleaders are undergraduate students at the nearby University of California, Irvine. The playleaders' time is spent exclusively on the site with the children and locating materials over the phone; 50% of the Director's time is spent on public relations.

The playground is open from 10 a.m. to 5 p.m. in the summers and weekends and from 2:30 to 5 p.m. after school. All sessions are free activity sessions except for rare programmed activity times (like cook-outs).

HISTORY

The Irvine Adventure Playground was included as a part of the overall Irvine, California residential master plan on the initiative of a woman from the community. She made a presentation on adventure play to the Recreation Commission in January 1974, after which other adventure playgrounds, including the nearby Huntington Beach Adventure Playground, were visited by Commission members. They were very impressed with Huntington Beach, including finding that it was closed because of a liability problem and then reopened after one week due to community pressure. Public hearings on the Adventure Playground were held in Irvine in 1975, after which the Recreation Commission and the full Council approved the idea. Paul Brady, who was the Director of Community Services during the playground's inception and subsequent development, and now the Assistant City Manager, is credited with "spearheading efforts to avoid compromises in its philosophy." Throughout the year of planning and hearings, the community and the local government were very supportive.

PROGRAM PHILOSOPHY

As expressed by Steve Sims, the Director, the philosophy of the Irvine Adventure Playground is to provide a setting where children can structure their own activities and experiences. The staff only intervenes if particular children exceed their own abilities or do something which could be harmful to other children. Mr. Sims considers that an important part of their program is not getting too involved in the children's activities, though he and the playleaders are always available as resources or for advice and assistance. They believe that children learn from other children, and should be provided with a rich physical and social setting for exploration and creative activity.

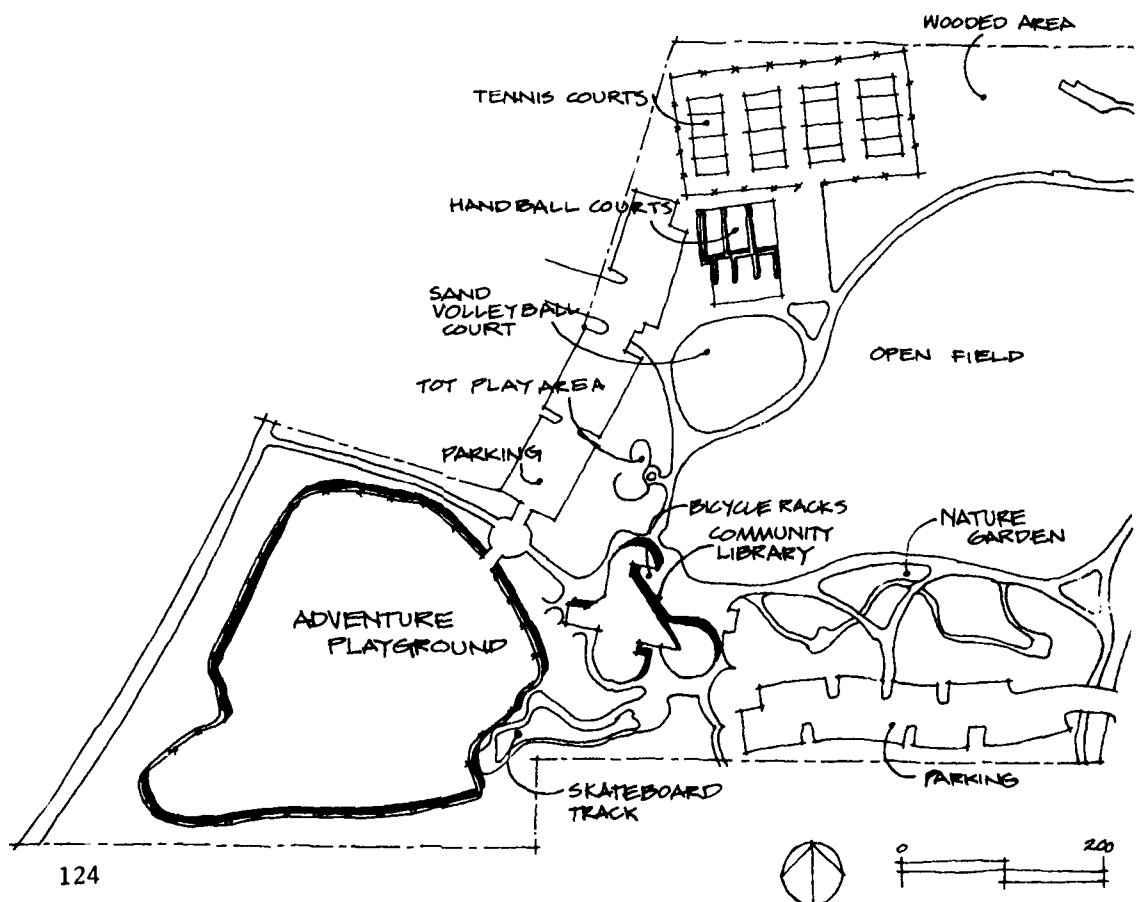
FACILITY DESCRIPTION

SITE AND OVERALL CONTEXT

The Irvine Adventure Playground is part of a 13-acre comprehensive park in the new, specially-planned city of Irvine, California. As such, it is one of only three examples of a comprehensive play park on the British and Scandinavian models reported here (see also Children's Village in Ontario Place and the Mary B. Conner Children's Playground). Other facilities in the park include a branch library, ball diamonds and fields, tennis courts, handball courts, sand volleyball court, community building, a skateboard ramp, a toddler's play equipment area, nature garden and general open space, paths, and parking. The park is situated in the center of a fashionable upper-middle-class suburb 55 miles south of Los Angeles.



The Irvine Adventure Playground experiences few disciplinary or fighting problems. Their philosophy on this issue is, first, to let the children work things out for themselves, and second, if necessary, to suggest, "Why don't we try this?" as a way of facilitating the resolution of conflicts. Only in a very few dire cases have they resorted to insisting of children writing an essay on why they shouldn't do a particular misdemeanor before allowing them back on the playground. Asked why there were so few disciplinary problems, Mr. Sims responded that children tend to help each other rather than compete with each other when the environment is rich enough, and that the particular environment of a successful adventure playground allows energy to be used for other pursuits.



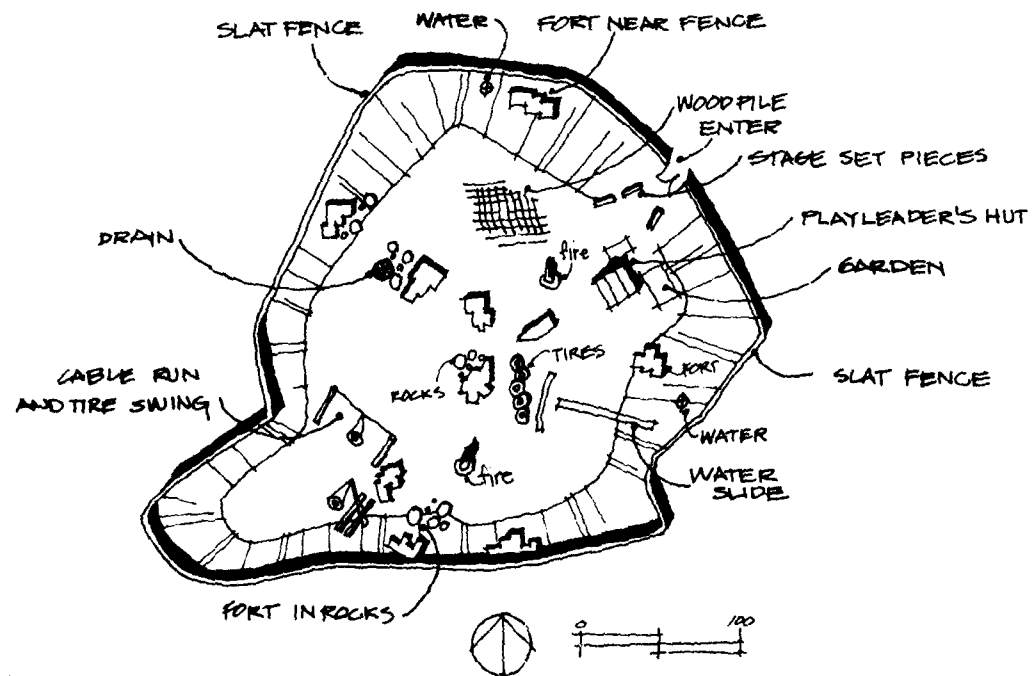


The site of the Adventure Playground is a 2.4 acre bowl-shaped oval roughly 300 by 125 feet on the west side of the park. There is a difference of about 12 feet from the bottom of the bowl to the edges, with an 8 foot wooden slat fence surrounding the site. Parking, bicycle racks, and the branch library with washroom facilities and drinking water are immediately outside the gate to the north-east. The site is surrounded by modern, rustic, two-story houses in this prosperous and fashionable community. The height of the fence is such that no sight lines from any of the windows in the houses can see any part of the site, nor vice versa from the site. The play area is mostly exposed earth in the bottom of the bowl with some grass and ground cover on the upper edges. Large clusters of rocks, a few small trees and two concrete fire pits dot the site. A playleader's 14 x 17 ft. shack with a 12 ft. open porch (an old miner's shack) is the prime infrastructure; it has a telephone, electricity, fire extinguisher, refrigerator, first-aid kit, storage for materials, supplies, and records, and space for playleaders and 6-8 children to be inside, but no running water. It is located near the gate on a northern slope overlooking the entire site. Secondary, non-drink-

ing water outlets are on the west and south perimeters of the site. They were in the process of developing a water slide from a trench and plastic lining when we visited.

CONCEPTUAL ORGANIZATION

The site is made up of forts, parts of stage sets, kid-built swings and climbing ropes. There are no overall "design concepts", but most of the construction was near the gate, the rock piles in the bowl, and the fence on the north perimeter. A giant wood pile dominates the north-central flat area.



INDIVIDUAL SPACES

The playleaders hut was a 14 x 17 ft. wood post-and-beam structure with a 12 ft. open porch supported by telephone poles. Two end windows let natural light into a central room subdivided by furnishings into two spaces. The most used space was the open porch which protects people from all but the lowest-angle very-late-afternoon sun.

Individual children's forts ranged from one-sided Western-style stage sets (used for spontaneous dramatic play) through various degrees of "houses" built from partial sheets of plywood, flats, loose boards, tires, sheet metal, and various soft materials--all recycled materials. Most were one room, though some were two rooms and were lavishly if simply furnished with cushions and chairs.

There were no washroom facilities and especially drinking water right on the site.



OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE

All children enter from the parking lot (the vertical slat fence being virtually unclimbable) then most go to the play-leaders' hut, then to the rest of the site. Some children go directly to their forts. All children with bikes take them to their forts.



During our site visit, a day in the high 80s, the porch of the hut was used for shade and talking with one of the play-leaders. The other playleader was working on the water slide and interacted with the children periodically, spontaneously, and as needed.

The primary activity of the children was self-initiated cooperative building in groups of 2 to 3 separated by sex. Most children were playing with other children--two girls were there for the first time and were seen to wonder aimlessly for a while. The spacing of the forts was partially random and partially influenced by the site, about 50% conforming to the topographical suggestions of rocks, water availability, fences, or telephone poles.

COMMENTS FROM INTERVIEWS

Two children interviewed indicated they could come to this playground or anywhere else in the community which didn't require crossing major traffic arteries. They could do anything they wished, "as long as they are clean by the time their mother gets home from work at 9:00 p.m." They also played on the swing set in another part of the park, but remarked that the "regular play area" was "OK, if you're lazy". They showed no interest in it really, while remarking that the adventure playground was the "best place." They also swam at a local pool, and liked that. The interview indicated that the adventure playground was their favorite place because they could build club houses or anything else they wanted and could do a variety of quiet and active things.

When shown the set of play area photographs, their favorite was the St. Francis Project Outdoor Learning Environment, which they thought looked like a "village" and that it had lots of places to play in, hide, etc. Their least favorite was the Jacob Riis Playground which they identified as slides and thought was "dull". The Notting Hill Adventure Playground photo was rated in the middle.

Other activities mentioned by the play-leaders, but not observed, were weekend camp-outs, evening cook-outs, water activity, fires, clean-ups at the end of each day, and a very little bit of gardening. Water is more used in the summers; fire in the winter.

Steve Sims, the Director, mentioned some things which would make the playground better:

- provision for a small pond in the bottom of the bowl--presently there is a drain and construction of a water slide was underway, but water play is so important and popular, especially in hot areas, that standing water would be appreciated
- several more large telephone poles in clusters to serve as stimulus and structure for building
- more animals, and integration with a 4-H club
- larger building, with a second activity room for arts and crafts or for groups to be alone
- more shade on site
- fresh drinking water and perhaps toilets (though toilets just outside the site was OK)
- two entry gates--one for people, one for materials

He was especially emphatic that more adventure-type playgrounds should be planned in Irvine in overall coordination with all parks and recreation activities. He recommended one adventure playground for each identifiable cluster of houses (ca. 2 mile diameter area). The present

close proximity to housing was seen as a plus, especially as this meant children did not have to cross major arterials, though adequate fencing from neighbors is then also a must.

Asked about the qualifications and training of playleaders, Mr. Sims suggested three critical qualities:

- ability to work with children
- knowledge of the adventure play philosophy of non-structured activity and the play-"leader" as facilitator
- knowledge of elements of the outdoors, of earth, construction, and general environmental awareness

No special training is necessary, and in fact, Bill Vance (also interviewed by phone), the founder and Past-President of the American Adventure Play Association, feels that most recreation or early childhood training is too structured for adventure play leadership unless the student goes to one of the colleges specializing in open education, the British primary model, or adventure play leadership.

ASSESSMENT

SPECIAL STRENGTHS AND WEAKNESSES

Other than the obvious popularity of the Irvine Adventure Playground for creative and building pursuits, one of its special strengths is its location in the center of a built up family housing area and as a part of an overall master plan for community recreation for all ages. A range of activities is provided for children and adults in the park, of which for children the adventure playground seems the most popular.

The site is a very strong feature of the Irvine Adventure Playground, and sets it apart from other adventure playgrounds in the country. No major thoroughfares have to be crossed for most children to reach it (radius - ca. 1 mile). The berm and re-

sulting bowl created by cut-and-fill make the site self-contained, private, and yet in very close proximity to housing.

A pair of programmatic features are important to the success of this playground--its very able and committed playleaders, and the strong community and local government support.

LESSONS

- need for adventure play areas as part of overall community park and recreation program
- advantages of location central to housing
- advantages of integration with a comprehensive play park for all ages
- advantages of cut-and-fill, berm-and-bowl site
- need for shade
- advantages of handsome vertical slat wooden fence to block lines of sight between housing and play area
- need for the playleaders' building to be large enough for storage, staff working space, quiet area, arts and crafts area, etc.
- only pre-construction necessary: grading, fence, building, water lines and drains, electricity and telephone hookups, possible toilets (if not any near)
- fence, telephone poles, rocks, etc. as stimulus for building and as base for structure
- two entries--one for people, one for materials

CONCLUSION

This is an enjoyable facility for children and it teaches cooperation in building and games and provides many opportunities for creative play. Building seemed to be the primary child activity, and they liked it very much. The observable philosophy is live-and-let-live or leave the kids alone unless they ask for help or fight. Major constructions such as the water slide were staff activities that children could help out with. The playground could use more vegetation for shade at a number of locations throughout the site. Bathrooms and drinking water as well as visual screening are very important.

The Irvine Adventure Playground has been called the most successful adventure playground in the U.S. It is considered to have the best use of funds, the best integration with the neighborhood both physically and in terms of community support, and the best playleaders. It has become a regular tourist attraction for people visiting Irvine.



JESSIE STANTON DEVELOPMENTAL PLAYGROUND

BASIC DATA

Client Institute of Rehabilitation Medicine
New York University Medical Center

Address 400 East 34th Street
New York, N.Y.
(212) 679-3200, Ext. 3219

Director Ronnie Gordon

Architect Richard Dattner, AIA/New York

Consultant Ronnie Gordon

Date 1972

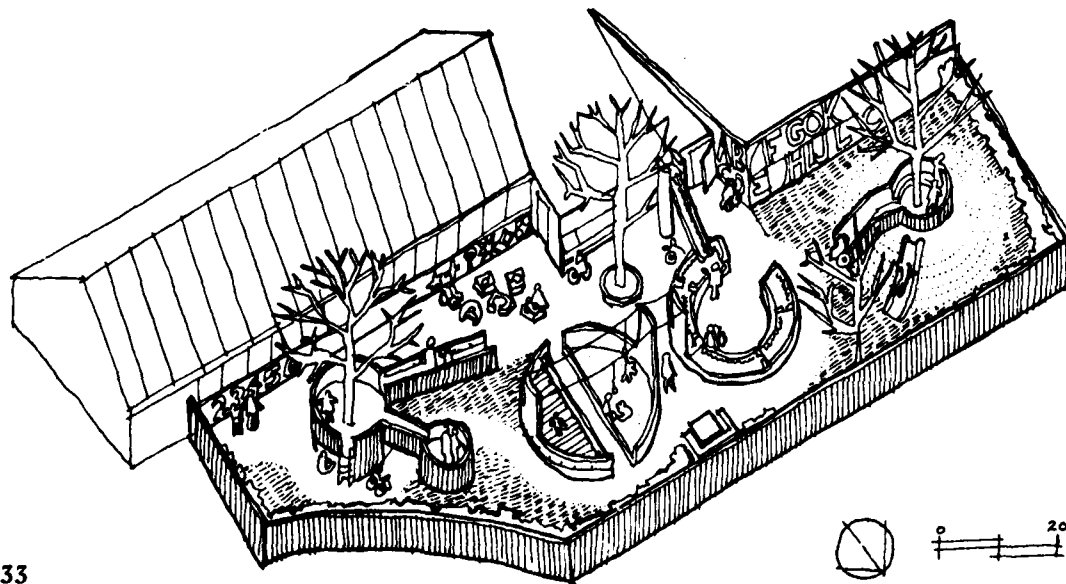
Users Severely and multihandicapped preschoolers

Size 5600 sq. ft.

Cost \$55,000. \$12.50/sq. ft.

References Learning can be fun. Industrial Design,
November 1970, 17, p.26.

Gordon, R. The Design of a Pre-School
Therapeutic Playground: An Outdoor
Learning Laboratory--The Jessie Stanton
Developmental Playground for Preschool
Handicapped Children. New York: New York
University Medical Center, Institute of
Rehabilitation Medicine, 1972, Monograph # 47.



PROGRAM DESCRIPTION

The program for the outdoor learning environment called for a setting that would allow and encourage young children with restricted mobility, reduced stamina, depressed motivation, and fear of failure to interact with more depth and vigor with people and objects, to derive satisfaction and a sense of self-worth, as well as to develop new skills and competencies from these interactions.

FACILITY DESCRIPTION

SITE

The outdoor learning areas is a fenced zone attached to a highrise building (a part of the Medical Center, New York University, on the east side of Manhattan). The site is shaded and visually buffered by a wood stockade fence from the adjacent heavily trafficked streets.

CONCEPTUAL ORGANIZATION

The playground is an elongated rectangle with four distinct activity areas aligned linearly, and connected by a peripheral asphalt track for wheelchairs.

Organizing Concepts

- Clear deliniations of activity areas to facilitate the ordering and organization of stimuli
- Varied experiences with natural materials and natural elements--sand, water, grass, etc.
- Increasingly more difficult tasks available
- Quiet, private nooks

INDIVIDUAL SPACES

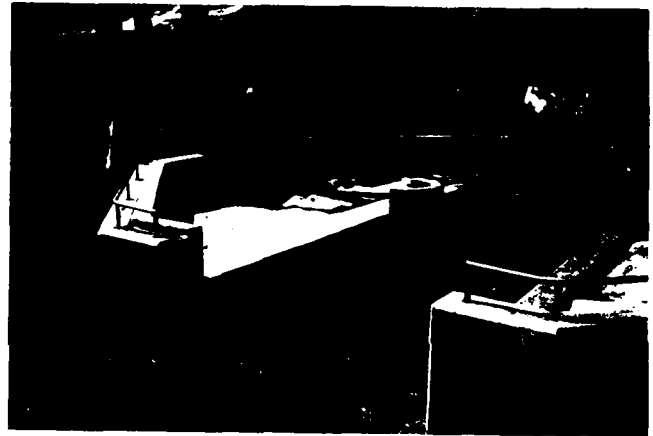


Tree House and Bridge

This structure facilitates an assortment of increasingly more difficult approaches and exits for children with varying abilities and rates of locomotion.

Foam and Sand Pits

This area is designed to allow for selected play and experiential activities for children who are unable to walk or sit without support.



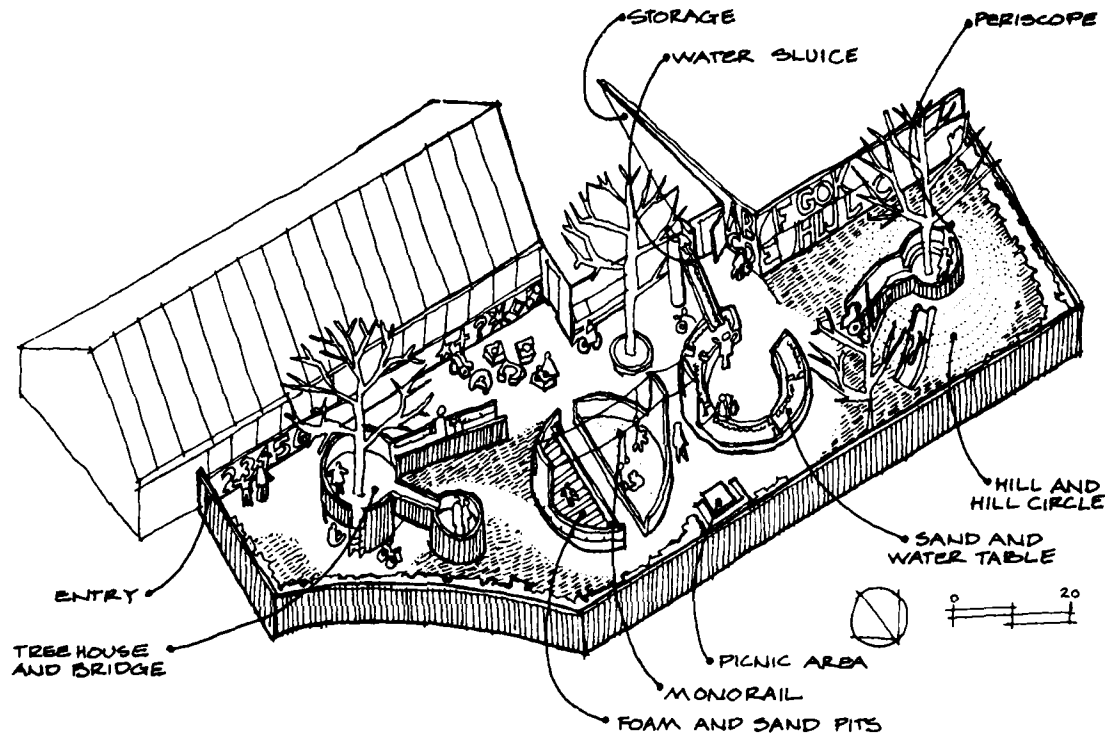
Sand and Water Tables

Water streaming from a water sluice through three water tables at graded heights allows children in wheelchairs to experience water play. Sand trays, similarly graded in height, are also available for non-wheelchair bound children.



The Hill and Hill Circle

A grass hill surrounding a tree is graded gently for crawlers as well as climbers.



ASSESSMENT

OVERALL DESIGN

This is a very specific design response to a brief but articulated program. The objectives--clear delineation between activity spaces, graded challenge, and variety--are successfully met.

The overall appearance of the site is in marked contrast to the urban, concrete and asphalt background of the area. This is due to an effect of the trees, shrubs, and landscaping, and the stockade fence--an effective visual buffer.

The choice of materials is good, in that it responds to several requirements, e.g., variety of experiences, durability for extended outdoor use, and responses to special needs such as surfaces for mobility, wheeled stretchers or chairs.

Specific spaces seem to respond well to stated developmental and activity objectives. Very few items were observed as under-utilized, (an exception being the monorail, which was not assembled for use).

COMMENT

The facility is used by severely handicapped children as well as those recovering from operations. The staff to child ratio is almost one-to-one. While the facility would be attractive to non-handicapped children, and is more interesting than most conventional playgrounds, it lacks the dramatic challenges found in other contemporary playgrounds that attract many children. As a model it might be very appropriate for "quiet play" zoned into larger playgrounds.

MARY B. CONNOLLY CHILDREN'S PLAYGROUND

BASIC DATA

Client	Friends of Recreation and Parks, and the San Francisco Recreation and Parks Department
Address	Just north of Kezar Drive and Lincoln Way, Golden Gate Park, San Francisco
Landscape Architect	Michael Painter & Associates/San Francisco
Date	Original playground 1887; renovation 1978
Users	Infants through adults
Size	ca. 3-1/2 acres; 2-1/2 acres renovation
Cost	\$394,000; \$4/sq. ft. including landscaping
References	Honor Award, American Society of Landscape Architects. <u>Landscape Architecture</u> , July 1978, <u>68</u> , 296-297.



PROGRAM DESCRIPTION

This playground was the first public children's playground in the United States, built in 1887. From initiative and funds from the Friends of Recreation and Parks (bequests and contributions), it was extensively renovated in 1978.

Originally the site was a large expanse of asphalt ringed with a boxwood hedge and a solid line of trees. What the landscape architect calls, "a row of horrible metal swings, spiral slide, and old cable car" dominated the center of the asphalt.

The program was developed by the landscape architect, except for the Friends request that the playground be "spectacular." The other main goals were to sustain children's interest, provide for imaginative and fantasy play, and provide physical challenges. Prevention of vandalism and safety were also of some concern and were reviewed very carefully over a six-month period by various arms of the city government.

FACILITY DESCRIPTION

This is a very large and spectacular playground in Golden Gate Park. It is the closest example visited to a comprehensive playground typical of northern Europe.

CONTEXT AND SITE

The playground is near the southeast corner of Golden Gate Park just north of the large University of California Medical Center, Kezar Stadium, and fairly dense, middle-income row housing.

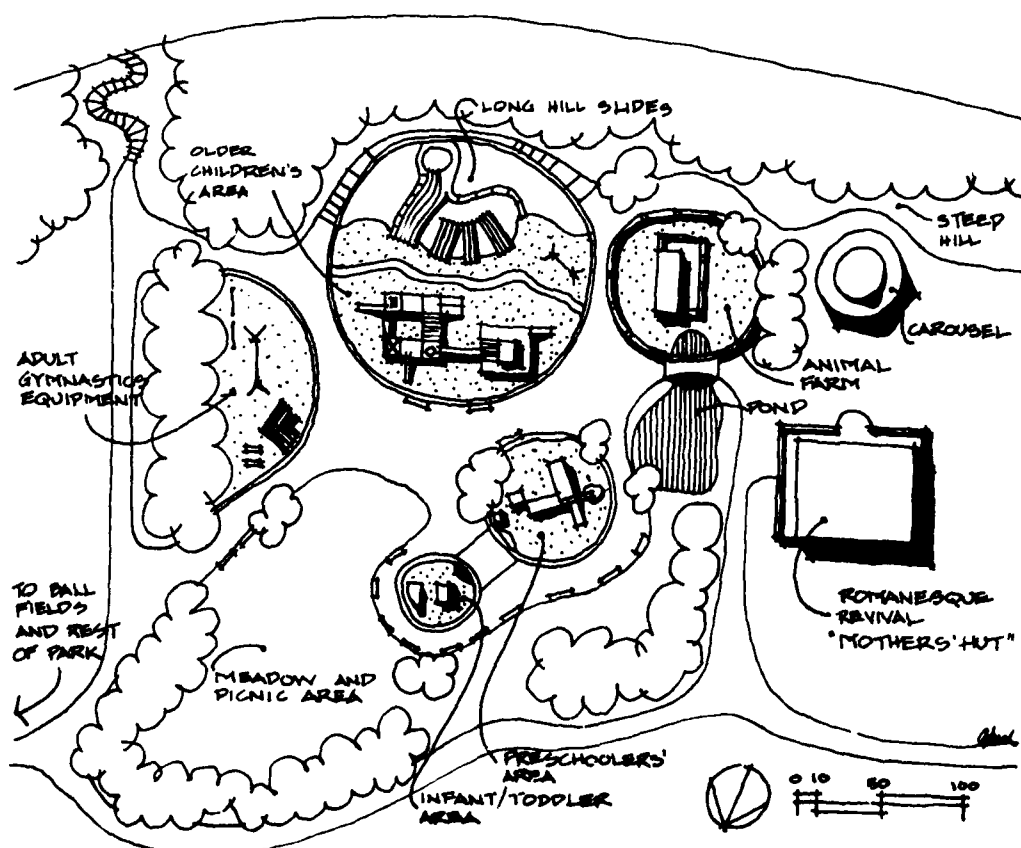
The site is in a bit of a valley at the bottom of a very steep wooded hill through which paths and trails--kid tracks--lead to the playground. To the north and west

is the rest of the park, ball fields, picnic areas, and woods in close proximity. The playground area, however, is in a well-defined clearing, surrounded by bushes and trees. There are no fences or other built barriers.

CONCEPTUAL ORGANIZATION

The main playground is comprised of nine different activity areas joined together by a wide, flowing circulation walk.

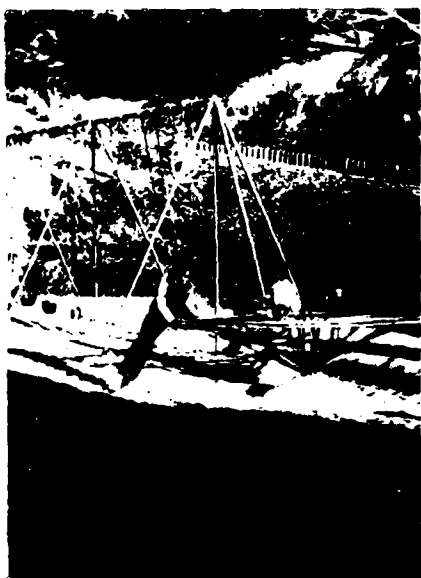
- toddlers area 36 ft. in diameter, with very small climbing and sliding structure, sand, and benches and ledges for parents
- preschoolers area, 72 ft. in diameter, with a larger, higher wood platform structure, slides, steps, ladders, etc., and a short 4 ft. Tarzan swing-jumping rope, all over a sand base



The predominant visual image is of complex, interconnecting wooden play structures on an extensive sand base connected by a free flowing asphalt path and surrounded by grass and space-defining woods.

OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE



This very interesting facility was a found playground, unknown to us before the trip, and actually only re-dedicated two months earlier. Unfortunately we visited late in the day. Even at that hour, several children from about 4 through 16 and some adults were playing. There were lots of remnants of use--many, many footprints in the sand, full trash baskets--evidence that this is a heavily used facility. The landscape architect claims that use jumped five-fold after renovation, and that sometimes there are hundreds of children at once, "so many you can't see the equipment any longer."



- older children's area called the South Play Area, by far the largest of the three, 160 ft. in diameter, with a wood platform climbing structure, four-(little) story tower, large tire bridges, nylon jump nets, wooden swinging bridges, large metal slides, suspended log roll, climbing structure made of 8 ft. diameter cable spools on end, and 42 ft. Tarzan rope from a 4 ft. platform to a sand jumping pit
- "Slide Mountain", an 18 ft. high bank of 14 parallel metal and concrete slides curving down the hill to the sand at the base of the South Play Area
- gymnastics equipment area
- barn and animal play area, consisting of a small barn and barnyard, directly adjacent to a pond where ducks swim
- carousel inside a neo-classic carousel building, originally installed just after the turn of the century
- the Sharon Building, a Romanesque Revival stone building originally designed as a Mothers' House for feeding and caring for children, presently vandalized by arson, and planned maybe as a new restaurant adjacent to the playground
- grass meadow and picnic area

Surrounding all the areas are many places for adults to sit, several drinking fountains, and the grass, bushes, and trees of the rest of the park.

EQUIPMENT

Each of the three main areas had specially designed wooden play equipment supplemented in part by brightly-painted metal catalogue equipment from Preminger Equipment. The wood was Western Red Cedar with galvanized steel pipes and chains, tires, etc.

As the animal play area was closed, the carousel being repaired, the shadows long, and the winds cool near the woods, the predominate activity seen was vociferous physical play on the three main structures, especially the largest most challenging and connected area, the South Play Area. Children were running, jumping, swinging, racing each other down the long parallel slides built into the hill, swinging and occasionally jumping from the 12 ft. Tarzan rope, and generally having a rousing good time.

Some parents watched from the convenient--though exposed--benches, while others actively played with (not just supervised) their children.

A few children were playing quietly in the sand on the sunny side of the infant/toddler's and preschoolers' structures.

This was one of only four playgrounds visited where we actually played at the playground while visiting it. The others were Children's Village at Ontario Place, Heckscher Playground in Central Park, and the Huntington Beach Adventure Playground.

ASSESSMENT

This is one of the very best pre-designed playgrounds visited on this case study trip. A number of qualities and features stand out as lessons for other facilities.

LESSONS

Comprehensive Playground

There are many advantages to a comprehensive playground where there are a wide variety of activities for children--and adults--to do, ranging from motor activities to quiet exploration to caring for animals or experiencing the wonder and majesty of an old-time carousel.

Developmentally-Appropriate Areas

Play areas with developmentally-appropriate, challenging things to do seem to lead to a natural self-selectivity of the child to his or her own level, and if properly separated by space and subtle material and level changes (sand to asphalt path back to sand) don't seem to need fences or other arbitrary devices to keep children apart. On the contrary, this allows a freer mixing of children of different ages and the freedom for a child to move from area to area as challenge or mood move him or her.

Siting

Siting is extremely important. This playground seemed partially successful in this regard in that the steep hill on one side and woods on the other are natural children's play areas, some micro-climate protection is provided by the same elements, and the playground is in a well-defined large space and yet obviously connected to other park activities. The old solid line of hedge and trees has given way to a modulated, partial edge with paths and framed sightlines to the rest of the park, but the playground might have meshed a bit more with the natural vegetation.

Child-Adult Play

Certain play equipment seems to allow and encourage parents to actively play with (not just supervise) their children. We do not know enough about this yet (there is some literature on the subject to be discussed in the criteria document) but one possible clue here is the adult-like challenges, and sizes of the largest play structure. The long, swaying, bobbing tire bridges are indeed difficult and fun to cross--the rolling log looked absolutely dangerous to an out-of-condition adult, and the 12 ft. Tarzan rope would bring heart palpitations and sweaty palms to the adult more than to the 12 year old child learned in these matters. The parallel slides were

observed to be a wonderful place for all members of a family--in one family observed, mother, father, and older child raced down the long slides, while their little toddler watched and cheered in glee from the grass embankment beside.

Flowing Circulation

The circulation path weaving among the different activity areas seems very successful as it is natural and thus unobtrusive, wide enough for adults to amble along while toddlers charge along on big wheels, interconnects all the areas and the rest of the park, and provides a natural edge to each of the individual activity areas.

Variety and Scale

The variety and scale of the play areas and their equipment is remarkable. The carousel is in a large rotunda and yet the scale of the myriad of animals, their details, and their gay painting is small and intimate. The animal shelter was scaled down, and yet not cute or such that would make an adult seem like a giant. The three main motor play areas varied from real infant/toddler scale to 12 ft. ropes and 4-story towers appropriate for older children and adults.

Safety

Though on the surface this playground might seem dangerous in comparison to other more conservative playgrounds and structures (high Tarzan rope, long concrete slides, long swaying tire bridges, etc.), various arms of the City reviewed everything carefully over a six-month period and requested only very minor changes, about half of which ironically were to remove certain rungs and bars from the manufactured equipment.

In fact, based on the experience of this playground and its very short time in operation, the landscape architect has designed and has in construction a second playground where the structures are even more daring and where the slides are larger and steeper so the children can get up more speed.

SUMMARY AND CONCLUSION

This is a large facility in San Francisco's Golden Gate Park. It has nine areas of different activities which seem to appeal to different age and interest groups, including an animal play area, a pond, and a beautiful merry-go-round. It is a city-wide facility, and it is well used. The play areas center on a major structure for older children--other equipment is graded for the child's level of development. Variety and scale are keys to its success. A child can move from one piece of equipment to another as interest and ability develop. Useful additions would be to provide adult activity spaces, a hard-surface play space for group games--dodgeball or basketball--and better mesh with the natural setting.

A major lesson for the Army may be that a large Army base may well be able to support a varied, well-developed, central play area which would indeed attract children, older siblings, and even adults from all over the base. Smaller play areas within easy access of housing could then be provided for more occasional use, for younger children, and as a part of the natural network of children's outdoor play behavior.

ST. FRANCIS SQUARE HOUSING DEVELOPMENT PLAY AREAS

BASIC DATA

Client	International Longshore Workers Union and the Pacific Maritime Association Pension Fund
Address	Between Laguna and Webster Streets and Geary Boulevard and Ellis Street San Francisco, California
Architect	Marquis & Stoller, AIA/San Francisco
Landscape Architect	Lawrence Halprin & Associates/San Francisco
Date	1964
Users	Children, mostly 6 to 11 years of age, and adults of the area
Size	ca. 8 acres; 37 dwelling units/acre
Cost	Not available
References	Cooper, C. St. Francis Square: attitudes of its residents. <u>American Institute of Architects Journal</u> , December 1971, 66, 22-27. Cooper Marcus, C. Children's play behavior in a low-rise, inner-city housing development. In D.H. Carson (Gen. Ed.) <u>Man-Environment Interactions</u> , Part 12. Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1975. Pp. 197-211.
People Interviewed	Clare Cooper Marcus, Social Science Evaluator of St. Francis Square, Department of Landscape Architecture, University of California, Berkeley

PROGRAM DESCRIPTION

St. Francis Square was the only civilian family housing area visited as part of this study tour. It was selected because it has been systematically evaluated as regards children's play and use of open space and has received very high marks. Although we were unable to approach the rigor of those studies, we were very fortunate to have as our guide to the facility their author, Professor Clare Cooper Marcus, and much of this case study is based on her published and orally summarized evaluations.

FACILITY DESCRIPTION

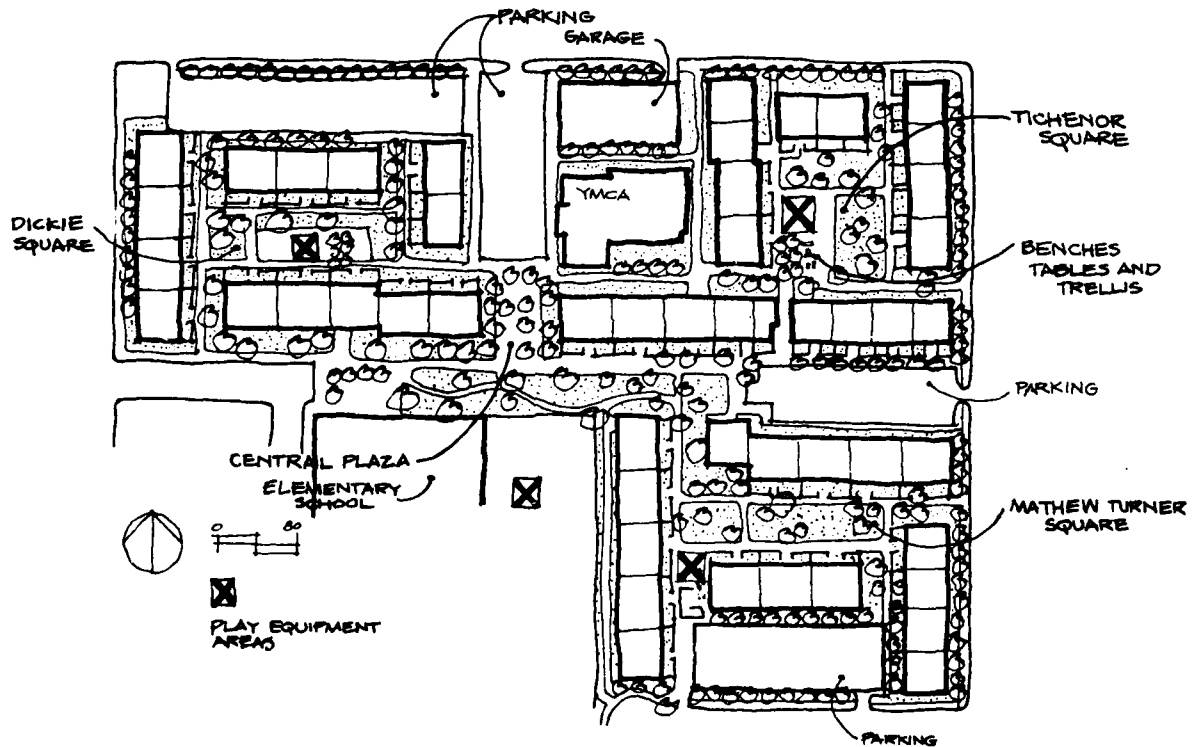
CONCEPTUAL ORGANIZATION

St. Francis Square is a moderate-density, low-rise apartment development for families with children. It is racially and economically mixed, with middle income being the norm. The 300 units in three-story walk-up buildings are mostly two- and three-bedroom apartments. The buildings are grouped around three interior landscaped courts. Two streets were closed to form a superblock. Apartments face into the courtyards with parking and all vehicular circulation on the periphery. Completed in 1964, the development was sponsored by the Longshoremen's Union and is run as a tenant-owned cooperative with a full-time resident-manager and a board of directors elected by the occupants. It is the northern-most, and most racially and economically mixed, of a sequence of housing developments known as the Western Addition.

INDIVIDUAL SPACES

The northeast court, called Tichenor Square, is 120 ft. square, and the two others are about 180 by 50 ft. Narrower open green space and sidewalks wind between buildings and courts. The buildings are 35 ft. high, so the ratio of height to court widths varies from 1:2.8 to 1:8.

Each court has a central play structure, benches, grassy areas and flower gardens in different configurations, and is separated from apartments by a lawn, sidewalk, and solid slat fences. Upper-level apartments have balconies; lower ones have gardens behind the fences.



ASSESSMENT

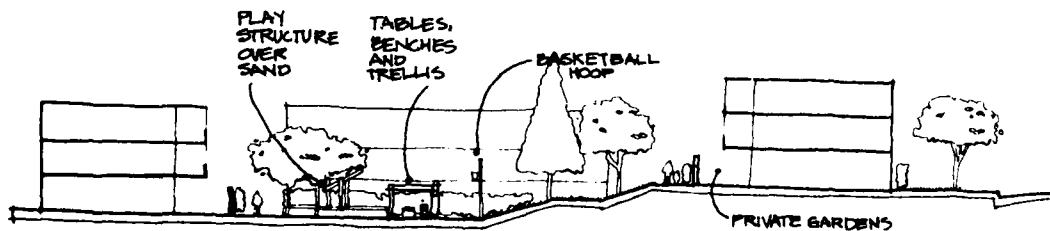
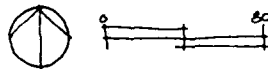
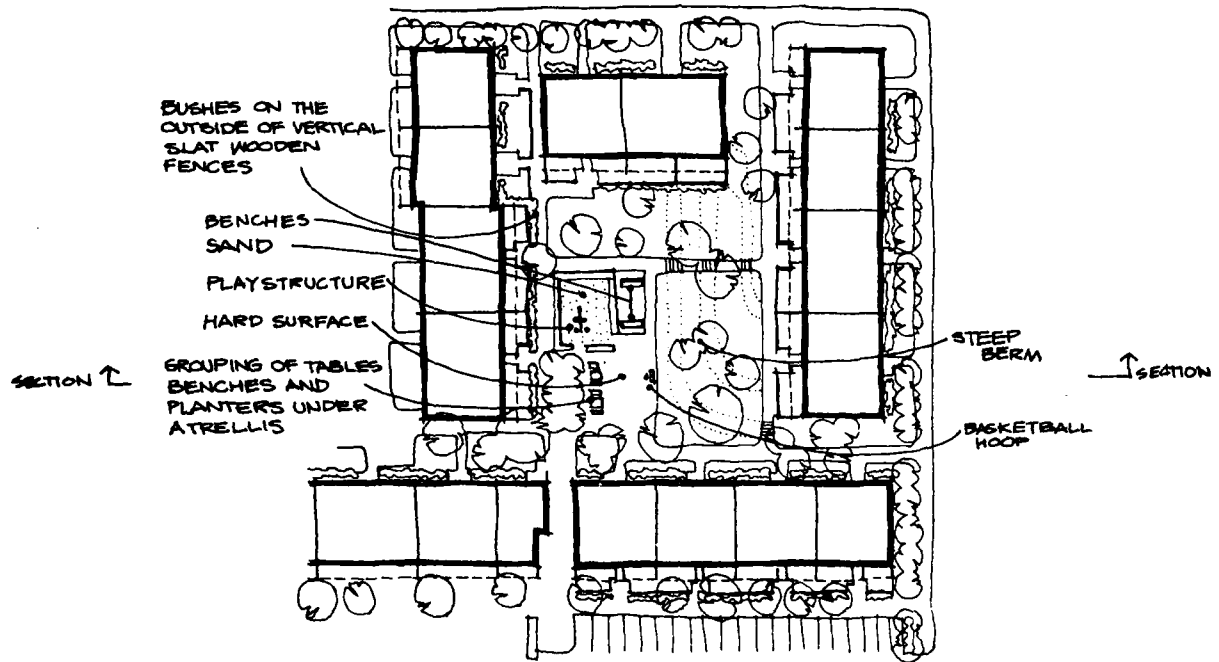
From all accounts, this is a very successful housing area in many different ways, including for children's indoor, outdoor, and transitional play needs. The research studies have shown, and our more casual observations give no reason to doubt, that children are by far the greatest users of the open space at St. Francis Square, and that there is a wide and varied range of things for them to do.

SPECIAL STRENGTHS

In contrast to many modified-Radburn plans studied since the 1920s, in contrast to studies done in several countries and with different racial groups, and in contrast to the military bases visited in this project (except Alameda Naval Air Station), considerably more children's play activity was seen on the interior open space courts. In the other studies and family housing on bases visited, children were more likely to be seen playing on streets, peripheral parking lots, cul-de-sacs, and garages than on the landscaped interiors of the block. Reasons for the reversal-- and success-- of St. Francis might be the following:

- Each court is well-defined and almost enclosed by buildings, thus making a mild micro-climate and well-defined group private "Yard".
- The size of the courts--all were of a human size and scale, maximum dimensions being 280 ft. long, with the most comfortable one being 160 x 180 ft.
- The ratio of height to openness is 1:2.8 to 1:8. In Tichenor Square, the building height to open space ratio is 1:5. This court appeared intuitively to us to be the best proportioned-- not too narrow relative to height to appear constraining, and not too long relative to height to appear too open. Other environment-behavior research has shown that for adults the height to width and depth ratio is a critical variable influencing the perception of enclosure. A semi-formal student study

under Professor Cooper's direction confirms what we observed, that of the three courts, Tichenor received by far the most child use.



- Units directionally face the inner open space (as well as having direct access to the street) and most balconies and living rooms are on the court side.
- Variety of settings and landscape elements in the courtyards. The courts are rich in variety, while the peripheral parking lots and sidewalks are flat, featureless asphalt surfaces generally barren of interest for children. Other studies have shown that variety and duration of children's focused play is related to the variety of settings and landscape elements available--spaces, grade changes, plant materials, surface types, and site furniture.
- Presence of vertical elements. Twenty percent of all play was observed by Cooper to involve some form of fixed vertical element--fences, benches, trees, platforms, garbage sheds, steps, and slopes--as well as the other variety of small spaces, changes in level, changes in surface, bushes, plantings, colors, textures, basketball hoop, overhead elements, etc.



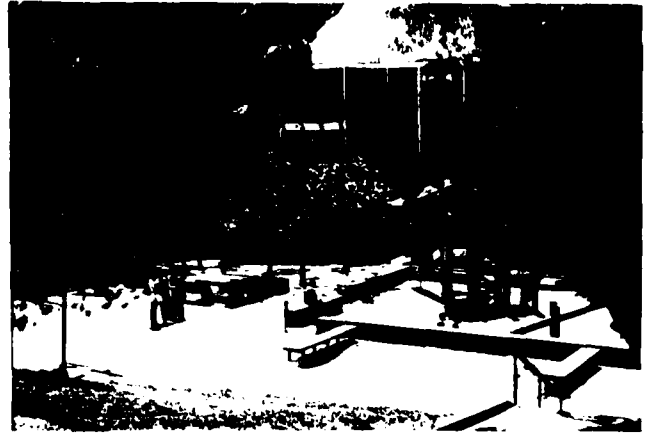
- Courts included wide pathways and fairly extensive hard surface areas where 60% of all play was observed. Other studies have shown that a great deal of play takes place on hard surfaces; in studies where this play

happens on busy front streets there are no other hard surfaces available. At St. Francis, hard surfaces abound in mixture with variety and other things appealing to children--and they are in the interior open space.



- Magnet effect of centralized play structure. The equipment in the two northern squares was redesigned and built by parents, and is a magnet particularly for preschool and elementary school children. "Play focused around these two play areas," Cooper noted, "even though relatively few children actually used the equipment." The play structure in the third court was not central and it and the exposed school yard play structure were seldom used.
- Grass and berm near other more active play areas, and yet separated somewhat visually from them where quieter, shyer, or more tentative children could just sit, talk, lay in the sun, or watch the action.
- Informal play areas for preschoolers near the dwelling entrances, including sand, grass, and trike surfaces.
- Security of play areas from traffic and human dangers. Proportionally more children, especially in the infant-5 year age range play outdoors in the well defined and well over-

looked spaces of St. Francis Square then in many other housing areas, including other modified Radburn-plan areas. Parents perceive the St. Francis courts to be "defensible territories" and thus allow their children out more, and this may be due to narrow openings from the street, grade changes from the street, balconies, living areas, and "eyes" being on the interior courts, and an image of a well-cared for, well-loved group private "yard" in the midst of an intimate neighborhood. It is possible that the lack of defensible territory at the military bases visited, combined with open spaces being too large, houses facing on the streets, lack of interior hard surfaces, and lack of variety may account in large part for why so few children were seen in the interior open spaces and on boring, isolated pieces of play equipment.



LESSONS

Clare Cooper Marcus: "Designers should be aware that the whole neighborhood will be used for play and not just that portion designated 'play area' on the site plan."

Successful interior open spaces for children's play thus seem to have the following characteristics:

- well-defined open space
- small court-yard sized space, square or nearly square, and in the range of 150 to 200 ft. on a side
- ratio of building height to open space in the range of 1:5 to 1:8
- housing units opening to the interior off pathways, with gardens, balconies, and heavily used interior spaces like kitchens or work studios overlooking the courts, and with parking on the periphery
- variety of settings and landscape elements--spaces, grade changes, plant materials, surface types, site furniture, and, perhaps least important, play equipment
- variety of vertical elements not specifically designated as play areas--fences, bushes, benches, poles, lamp posts, trellises, garbage sheds, slopes
- wide pathways and other hard surfaces, undesignated for play, but where play will happen anyway
- centralized, visually focusing and challenging play structures provided as magnet around which play may focus
- grass and berm areas--retreat and breakaway--near center yet visually somewhat separated
- informal play areas with sand, water, grass, and trike areas near dwelling entrances
- defensible territory created by narrow openings from the street, grade changes from the street, and eyes on the interior open space

WASHINGTON ENVIRONMENTAL YARD

BASIC DATA

Client Washington Elementary School,
Berkeley, California

Address 2300 Grove Street at Bancroft Avenue
Berkeley, California 94203
(415) 845-4536

Co-Directors Robin Moore and Herb Wong

Designer Robin Moore, Berkeley

Consultant Mary Jefferds, Environmental Education/Berkeley

Users During school hours, usually 25-30 K-3 students,
plus both younger and older children during
non-school times; 8-to-12-year-olds predominate
with general community use

Date Planning started mid-1971, construction 1972

Size 1-1/2 acres, of which 1/2 acre is the Natural
Resources Area

Cost \$30,000, of which ca. \$15,000 was for the
natural resource area; less than \$11/sq. ft.

References Moore, R. Project WEY: Washington
Environmental Yard. Berkeley: Project WEY
(2300 Grove Street), 1972.

Moore, R. Anarchy Zone: encounters in a
schoolyard. Landscape Architecture,
October 1974, 65(5), 364-371.

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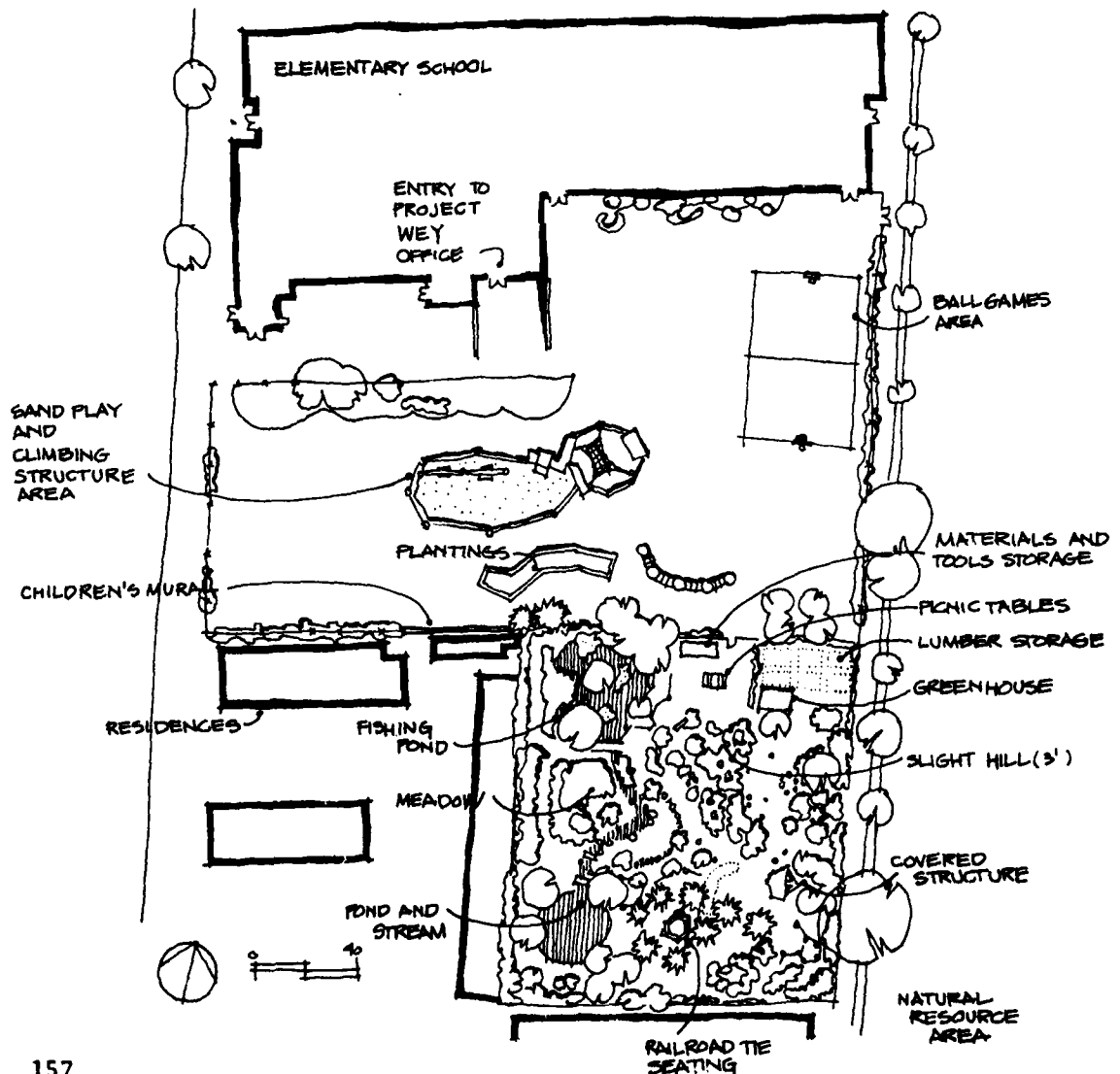
Moore, R. Open space learning place. In
G.J. Coates (Ed.) Alternative Learning
Environments. Stroudsburg, Pa.: Dowden,
Hutchinson & Ross, 1974. Pp. 229-246.

Moore, R. A WEY to design. Journal of
Architectural Education, 1978, 31 (4), 27-30.

People
Interviewed Robin Moore

PROGRAM DESCRIPTION

Washington Environmental Yard is many things. It is a reclamation of an old underused asphalt playground. It is an experiment in neighborhood participation. It is an extension to a school--making environmental education integral to curriculum. It is three play areas master-planned together: a traditional ballgames area, a series of contemporary climbing, running, playground structures, and a natural resource area. The latter is the best known and has become synonymous with the name of the entire outdoor education area--Washington Environmental Yard.



The whole scheme, but especially the natural resources area, is the joint creation of Robin Moore, a Berkeley environmental designer, Herb Wong, the progressive principal of the school, and the children and parents of the neighborhood.

PROGRAM PHILOSOPHY

Washington Environmental Yard, and its central Natural Resources Area, is a multi-disciplinary approach to environmental education in an urban context. Children are exposed to living systems in a way which is not possible in a traditional city park or school playground, or for that matter, in a school which doesn't use an outdoor natural resource area as an integral part of the classroom. Washington Environmental Yard is an attempt to put back into the city and the school something which has been missing in urban curricula.

Washington Elementary School houses over 400 4 to 10 year olds (K-3). About 1/3 of the teachers use the Yard as a classroom resource on a day-to-day basis. Another 1/3 use the yard only occasionally.

In addition to school-related curricular uses of the Yard, children and adults are free to use it on weekends, evenings, etc. The gates are open 24 hours a day.

There are no written rules in its use. It is first a place for children--adult values came second. Rules arise from the values of the children. Wading in the water, for example, is most often discouraged by adults and children alike.

HISTORY

Participatory Planning Process

Washington Environmental Yard was initiated in 1971 as a neighborhood-school demonstration project of how an asphalt playground can be converted into an ecologically viable area for children's play. Curricular needs of a K-3 school, and the recreation and aesthetic needs of residents of the surrounding community were also important.

Funding for both the 1-1/2 acre area and the interrelated environmental education demonstration project has totalled about \$174,000, of which approximately \$30,000 has been spent on capital improvement and of this, about \$15,000 on plant materials for the Yard.

Funding has come from diverse sources: a planning grant in 1971 from Educational Facilities Laboratories, donations from Chevron in the private sector, grants from the State of California Office of Environmental Education, and funds from the School Board of the Berkeley Unified School District.

Construction has been carried out by students from the University of California working with parents and children and with occasional paid assistance for heavy equipment.

The project began with informal planning for seven months in 1971. This included surveys of children in the school and of the neighborhood, working with parents and teachers, and community-school workshops.

In February of 1972, the first of a series of Community Yard Fests was held. The turning point for all people involved was "the greening of the yard" which was initiated at the 1972 Yard Fest when some children began to remove the asphalt.

Then followed a struggle for two years as funds were sought, as detailed planning strategies unfolded, and as the first plant communities began to take hold. (Adequate initial funding could have eliminated or drastically reduced this 2-year period.)

The project took off in 1975-76 when the aquatic system was introduced and final grading and planting were completed.

Natural Resource Management

Since the 1975-76 major plantings, activity has mainly revolved around natural resource management. During this 2-1/2 yr. nursery establishment phase, a number of resource management procedures were adopted, including:



- watering of certain trees and plants until their root systems had a chance to spread out
- pruning trees, to keep balance of the various communities while slower growing plants were taking hold, and to trim any lower weak branches damaged by too early climbing, etc.
- staking and tying up trees
- assisting the formation of paths by simple, rough fences, and the formation of meadows by interrupting some paths
- replanting certain species as more was learned about the conditions under which they would grow
- leaving a dark corner to grow over thickly and provide places where children could hide out
- clearing brush from near ponds to provide space for study and exploration of the pond ecosystem

Robin Moore did say that you could simply let a yard go and it would do its own thing, but that in order to develop a varied and rich set of eco-communities in a small space, it is necessary to practice resource management. In interview, the children obviously recognized and respected this management.

The Yard took three years to reach maturity. Now it is stronger than the children, and from it they have a new understanding and respect for natural ecosystems.

FACILITY DESCRIPTION

CONTEXT AND SITE

Washington Elementary School is in a culturally diverse middle and lower-middle income area of Berkeley, California. It is at the corner of two busy city arteries, and across the street from the City Hall and 5000+ student Berkeley High School.

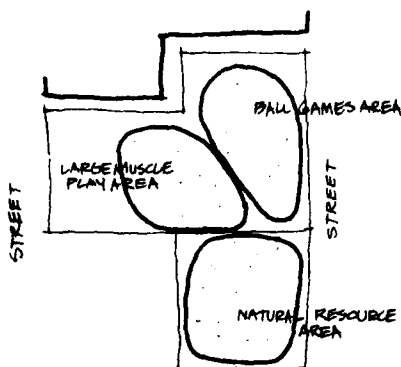
The playground is on the south side of the school, in an "L"-shape. Originally master

planned to extend to the west by closing a small residential street and including a preschool play area in a series of alternating natural environments and more green areas for large-muscle play, the final area is 1-1/2 acres directly behind the school. Prior to 1971 this area was asphalt, with basketball hoops and baseball diamonds scattered here and there, and a 10 ft. chain link fence around it. A few trees lined the boulevards on the sides and dotted the backyards of houses to the southwest. Otherwise, the site was barren.

CONCEPTUAL ORGANIZATION

The entire Yard is made up of three distinct areas:

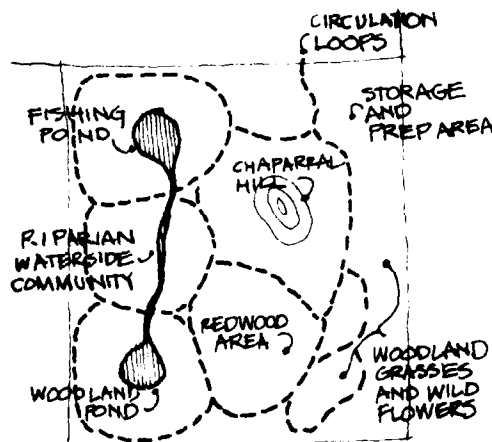
- asphalt ball games area, as before
- large muscle play area, a one-off design of large timbers (\$7,500) comprised of a series of giant connected spools, a raised plantings area, a large climbing structure surrounding an approximately 10 ft. square cargo net, and a sand play area with swings for toddlers and preschoolers
- the natural resources area to the rear of the play structure area



Natural Resources Area

The natural resources area is comprised of a storage and preparation area near the gate, and six different plant communities, all con-

ned by a series of looping circulation paths of packed natural soil. There is a slight 2 to 3 ft. hill in the center, two ponds and a connecting stream on the western side, and an 18 in. rise on the eastern edge.



The six communities include the following:

- redwood community
- cool woodland pond community
- riparian waterside community
- fishing pond community
- chaparral hill community
- dry woodland grasses and wild flowers community

The most difficult area of technical design, Robin Moore said, was the aquatic system. It involves natural ponding, building up the soil to retain water, allowing enough

to seep into the edges to support natural riparian vegetation, and recycling water by pump.

The emphasis everywhere is on plants and conditions natural to the coastal region of California. Plants and trees were selected from common woodland, chaparral, and roadside varieties: woodland birch, redwood, California bay laurel, oak, Monterey pine, and white alder (the last an especially hardy riparian tree), and various wild flowers, grasses, and herbs in abundance.



The designer estimates that 135 species of plants now thrive on the Yard, where then once were only 6. (To "see" them all requires many visits.) Nearly 40 species of birds have been recorded by the children. A multitude of terrestrial and aquatic organisms have also made their home on the Yard, and are still being inventoried by the children.

OBSERVATIONS AND INTERVIEWS

The Yard is still mostly a self-help neighborhood and school participatory project; parents still plant things rather than hire a landscape contractor. This process, the

designer feels, reinforces neighborhood participation as a community development strategy.

A large range of behaviors have been noted on the Yard: exploring, biking on the paths, picnicing, fishing, make-believe weddings, quiet sitting and talking, rafting in the pond, and set-up experiments by teachers or special CETA environmental education teacher's aides. The children also talk of hide-and-seek games, hanging out, sitting around in the evenings, crawling through the bushes, playing in the "river," the dirt, trees, and sand, and watching frogs in the bushes. Parents even talk of the joyful opportunities for their children to pick berries, to just lie and look at a bug, or to lay back in the sun and dream.



The children strongly feel that the natural resource area is the best part of the overall Washington Environmental Yard. It's "un-usual" they say, "it makes you feel you're in a special place."

Destructiveness

"Destructiveness," Robin Moore points out, is an adult term and normally is judged in terms of adult values. Some ancillary destruction does occur, he says, like bouncing up and down on a young small branch, but deliberate vandalism has been extremely rare, e.g., even the incidence of initials cut into trees is rare.

ASSESSMENT

Washington Environmental Yard is a cool oasis in the middle of a busy city and the middle of a hot asphalt jungle. The sound of the water and of the trees partially masks the sounds of the city.

The water is shallow and thus not dangerous. The pump seems to be assuring clear, fresh water, with no evidence of stagnation.

The looping circulation assures no dead ends where children might plow into fragile vegetation. It also provides natural edges to help differentiate the three major ecosystems--chaparral hill, woodlands, and water marshlands--and variations.

As noted, intentional vandalism is very low. There is a camouflaged fence around the site and only one entry to the natural resource area, but Robin Moore does not consider branch breaking, leaf collecting, and fishing vandalism. He protects the trees until they can survive on their own (2 to 3 years).

Though design for the handicapped was not a primary consideration; children in wheelchairs or on crutches could likely get around the packed dirt paths and even could be helped by the present railings.

A special strength of the Yard is the process by which it was planned, built, and now maintained. Parents, children, teachers, the principal, Herb Wong, university students, occasional visitors from all over the country, and Robin Moore worked together on all phases. The community apparently gained confidence from this process that

self-help projects are a viable--if lengthy--way to cope in an overly bureaucratic modern world.

Another special strength is of course the opportunities which the Yard provides for extending the classroom to natural areas. We saw examples of teachers asking students to put colors down on paper and then go to the Yard and find things which most closely resembled their color, of teachers using the ponds to have the children collect samples and then analyze them on the Yard or in the classroom, of children preparing seeds in the greenhouse and then, when strong, planting them, and a myriad of other uses.

This is not the type of "landscape architecture" which either the newer urban-oriented landscape architects, nor the older traditional landscape designers have learned. Robin Moore: "Many landscape architects have preconceptions which are unrelated to creating a landscape for children under these circumstances." His guidance--beyond professional degrees--comes from the study of how natural systems work, e.g., Muir Woods and the Berkeley Hills.

At Washington Environmental Yard, children have learned about ecological cycles and principles which they might never have learned from books. They have been provided with tremendously imaginative play areas which a concrete or wood structure playground could never provide. As one parent said, "The range of play and environmental education available are much richer than they can get elsewhere." The children have learned, as one boy said ". . . how to respect natural systems. We used to break off limbs, but now we understand how to enjoy nature, how it is, how it grows, and how to take care of it so it won't die."

Many city and suburban children have no real understanding of natural processes. Washington Environmental Yard gives back some of these experiences to childhood.

INTERVIEW WITH JAY BECKWITH

In addition to discussing the "Big Toys" Installations visited, we also interviewed Jay Beckwith about his general ideas for children's play.

Jay Beckwith is an independent designer and Chief Designer for Big Toys/Northwest Design Products, Incorporated. His background includes studies in art, physics, and early childhood education (at Pacific Oaks College). Before joining Big Toys he designed and helped to build 182 school and community playgrounds in the San-Francisco Bay Area.

GOALS FOR PLAYGROUNDS

Beckwith considers there are four main goals for playgrounds:

- physical learning and motor challenge
- dynamic balance
- social interaction
- cognitive play

He considers the fourth the hardest to achieve, and offered that without loose parts, dynamic elements, and possibilities for change, "Big Toys" are rather "dry" in this regard.

Play Activities

Beckwith suggests that a variety of play functions are needed in a play area, and that the amount of use is a function of number of play opportunities. He doesn't think that any pre-built structure can give children as much as they can get in a free situation. "If you have a house (a park)," he says, "and you put some furniture in it (play equipment), you still don't have a home (quality play experience). It still needs people (play leaders?), connections, loose parts, interest, and changing stimulation."

Safety

Beckwith considers this to be a major issue in the minds not so much of parents as administrators who are concerned with liability, and thus that it is perhaps the major stumbling block to truly successful play schemes.

His experience is that it is increasingly difficult to get one-off designs approved, not because they are more dangerous than what exists (and are much less dangerous than metal equipment over asphalt), but because they are new. The more deviations from standard solutions, he adds, the more concerns are expressed about safety, liability, and waivers from families for damages. He estimates, however, that the number of accidents/child hour of use on specially designed playgrounds is less than the number of accidents/child hour on bathroom doors in schools.

He suggested (but we forgot to ask the source) that it is "fairly well established" that injuries are not primarily a function of the apparatus itself, or its heights, but of the use patterns of the children, and this can be controlled through good design (e.g., zoning of different ages and types of incompatible activities).

INTERVIEW WITH MARILYN ROTHENBERG

Marilyn Rothenberg is an environmental psychology researcher of child-environment relations, specializing on playground and child care centers. She holds a Ph.D. in environmental psychology and currently is a playground consultant for Children's Television Workshop.

In a telephone interview, she stressed the following three points about environments for children's play:

- Play spaces should be special places not duplicating what already exists in a community, rather they should complement the natural play spaces of childhood by providing for current needs--and they should be special. Though recognizing the value of open free space for children (in contrast to only thinking about labelled, constrained space), she feels that special play spaces are very appropriate and valuable for children. Her ideal models were special events play spaces, like Captain Kid's World in Sea World, San Diego, and Children's Village in Ontario Place, Toronto (see Children's Village Case Study).
- Play spaces should recognize the importance of social interaction among children and provide opportunities and challenges the successful completion of which necessitates social interaction. It is also important, she felt, to provide areas for being alone or in small groups.
- Play spaces should provide stage sets for fantasy.

CONCLUSIONS: CHILDREN'S PLAY AREAS

INTRODUCTION

While the criteria for children's play areas on military bases will be developed more fully in the Criteria Document several recommendations and conclusions can be drawn based on the site inspections. This section of the travel report attempts to identify some of the significant patterns and lessons learned on the inspection trip. Each issue is introduced by a title or topic statement followed by a review of observations and facts that lead to a conclusion or recommendation.

VARIETY OF PLAY PROGRAMS

Military

At all the military bases visited, we saw basically one type of playground; what we and others call "traditional" or "conventional" playgrounds. These are characterized by fixed-in-place play equipment selected from catalogues, usually by administrators, and installed according to manufacturer's recommendations. The older traditional equipment was metal--galvanized steel pipe--while the newer traditional type of equipment mixes wood with metal. Pieces in other materials may be included (e.g., the Oakland Army Base's concrete turtle). Equipment may have dynamic parts like swings or a merry-go-round. The equipment tends to be scattered around on its site.

Military base play areas, whether associated with a school (like Ft. Lewis) a recreation center (Ft. Meade), family housing (Ft. Hood, Alameda, etc.) or child care centers (all sites) were exclusively of the traditional metal or metal and wood play structures.

Some bases did have excellent natural play areas for children like fields, and woods with varied topography (Ft. Hood, Ft. Bragg, Ft. Lewis) but many bases are not as blessed. Children who do have access to natural sites are, for a variety of reasons, advised to stay away from them.

At all bases children were observed to play more in the streets, on front porches, around front yards, corners, cul-de-sac drives and natural areas than they were in any designated traditional type of play spaces, whether they were located behind housing, in the "green belt," or on school playgrounds. This is a pattern also found in other research.

Civilian Sites

At the 19 civilian playgrounds studied and at the 15 civilian child care facilities studied a wide range of play programs were found, including:

- conventional playgrounds (e.g., Big Toys Installations)
- contemporary playgrounds (e.g., Five Central Park Contemporary playgrounds)
- playgrounds especially for the handicapped (e.g., Jessie Stanton Developmental Playground)
- special events playgrounds (e.g., Children's Village in Ontario Place)
- adventure playgrounds (e.g., Huntington Beach Adventure Playground)
- child care center play yards with animals, gardens, outdoor art, exploratory play, quiet play, etc., (e.g., Pacific Oaks College Children's School)
- natural resource/environmental awareness playgrounds (e.g., Washington Environmental Yard)
- hands-on special learning environments (e.g., Brooklyn Children's Museum)
- comprehensive play parks (e.g., Irvine California's University Park including the Irvine Adventure Playground, or the Mary B. Connolly Children's Playground)
- play networks in housing areas (e.g., St. Francis Square Housing Development)

As summarized in the case studies, several of the above types of playgrounds are especially popular with children and staff. These same playgrounds had the most developmental value too.

RECOMMENDATIONS

- On military bases provide a full range of types of developmentally-appropriate play areas as suggested by the above list.
- In programming types of play areas, consider social, intellectual, and physical developmental needs.
- Provide comprehensive play parks and networks of play in family housing areas which link together several types of play experiences.
- Provide a variety of linked experiences (Networks of play) within a one mile radius of each home. (A one mile radius is the average home range of young children with bicycles).
- Include adult play areas in comprehensive play areas.
- Include an adventure play area in a comprehensive play park for family housing areas (adventure play areas serve a two mile radius).
- Associated with or very close to elementary schools and child care centers, provide a natural play area or "Environmental Yard." Or where appropriate, implement conservation zoning practices to insure the preservations of natural eco-systems which could be (or are spontaneously being) used for play and environmental awareness.
- Consider as part of a community library or recreation center the possibility of a modest hands-on children's museum.
- Consider a centralized special playground near commercial centers (see discussion in "Central Park Comparative Analysis").

Issue for Discussion

We have recommended varieties of playgrounds and play areas that are outside the experience of most children, parents, and base master planners.

Since people deserve to have choices, it would be inappropriate to require all the types of play or even any single type. Still, it is easy to predict that without personal experiences with these various types of play areas, only the most familiar and easiest will get built. We firmly believe that a variety of play areas should be built. In other words, the issue we see is: How to make people aware of the possibilities, alternatives, costs and benefits of different kinds of play.

CHILD'S PLAY AS A LOST SOUL

MILITARY

We were told that there were five possible ways of getting play "equipment" for Army bases:

- turnkey program (see Fort Hood)
- self-help program (see Fort Hood)
- non-appropriated funds and maintenance funds through the family housing office (see Fort Lewis)
- reserve unit or a battalion looking for a service project to build (see Fort Meade)
- child care center attempting to use limited funds for outdoor equipment or requesting assistance from local facilities engineers (see Oakland Army Base)

Judging from the state of children's outdoor recreational environments on all bases, none of these methods are very successful. The turnkey incentive program may have the most potential.

Results of interviews at several bases (e.g., with a Family Housing planner at Fort Lewis) suggested that the root of the problem may be that children's outdoor recreation needs fall "through the cracks" between different offices,--and that they are a low priority issue on everybody's list.

CIVILIAN SITES

"The child's right to play" is also a low priority issue in the civilian world. Civilian playgrounds are supported and funded in a variety of ways.

- sponsorship by a city-wide parks and recreation department (this includes the expensive playgrounds in Central Park, New York, and in Golden Gate Park, San Francisco, and the much less expensive playgrounds at Huntington Beach and Irvine)
- financial backing by a foundation (e.g., Hechscher, Adler, Lauder, Mary B. Connolly)
- community self-help (Big Toys, Washington Environmental Yard)
- sponsorship by an elementary school district (Big Toys, Buchanan School Playground, Washington Environmental Yard)
- private donations (Mary B. Connolly Washington Environmental Yard)
- state and other government grants (Washington Environmental Yard)
- municipal backing and then user entry fees (Children's Village in Ontario Place, and maybe Huntington Beach Adventure Playground)

Though there are several models here worth pursuing, the fact still remains that children's needs are allotted as little as 3% of a large housing budget while as many as 50% of the residents may be children!

RECOMMENDATION

- There is a definite need for a designated children's outdoor recreation advocate on each base, a person knowledgeable about child/environment relations who is charged with the responsibility of advocating for children's needs, coordinating programming and planning efforts, and stimulating new actions. This role and this person should likely be in a branch which has planning, recreation, and or child

development expertise. The office should have its own budget for use in implementation.

ISSUE FOR DECISION

- Who should be the advocate for play on each base, and in what office should he or she be housed?

DISTRIBUTION AND CATCHMENT AREAS

MILITARY SITES

Military designated play areas were predominantly in the green space of modified Radburn-type plans or associated with elementary schools and child care centers.

A goal at Fort Hood and Fort Bragg is to have 1 tot-lot playground (i.e., a set of traditional play equipment for pre-school age children) for every 50 housing units (i.e., approximately 1 for every 100 children) which for a base the size of Fort Hood would mean close to 100 tot lots.

Another large base, Fort Lewis (ca. 60,000 residents) had only 30 designated places in family housing areas, each with a few pieces of equipment (see the Fort Lewis housing area map), plus 5 school playgrounds.

CIVILIAN SITES

Developmentally-based standards on recommendations for the number of play areas a community should have are hard to come by. No one interviewed was able to make a sound general argument on this. (The Southeastern Wisconsin Regional Planning Commission suggests 22,000 sq. ft./1000 people with a minimum size per play area of 10,000 sq. ft. While 1/500 people is much greater than the 1/190 (1/50 families) suggested on Army bases the figures are for regional planning and not the more dense "planned unit development" that the family housing areas on the various bases more clearly resemble.)

However at the adventure playgrounds, the Directors felt strongly that adventure playgrounds should both be integrated completely into a city-wide recreation programs, and that there could be an adventure playground every two-miles on center so no child would have to go more than a mile by bike to the playground. If many children don't have bikes, even a mile may be too far to go.

ISSUE FOR DECISION

- Considerably more attention needs to be given to the issue of the distribution of different types of play spaces and to predicting the appropriate catchment area for the various types of play areas.

STAFFING PLAYGROUNDS

MILITARY

No military playgrounds had any sort of specialized recreation staff or play-leaders, except for teachers on "recess duty," coaches on ballfields, or care-givers with their children at child care centers.

CIVILIAN

All three adventure playgrounds had 2 to 3 staff members with responsibility for the grounds and the children. The positions included a head playleader or director and 1 to 2 assistants. Washington Environmental Yard had a specially hired CETA employee, the designer, and the environmental educator/school principle as the main staff. The "Yard" is used as an integral part of the curriculum of the School.

Operating expenses for an adventure playground (drawing children from a 1 mile radius in a medium-density suburban area) including both salaries and other operating expenses were estimated to be \$20,000 a year. This figure is considerably less even when projected over five years than the cost of the contemporary equipment oriented playgrounds in New York City.

Playgrounds without staff are a relatively new phenomena. Until the 50's, many playgrounds in this country had at least 1/2-time staff. Summer play programs at schools still are staffed. But more playgrounds are unstaffed and follow the Germanic tradition of playgrounds as locations for gymnastics oriented equipment.

The British and Scandinavian playground traditions are different. They treat the outdoors as a setting (not unlike indoor settings) for child-staff interaction and development. There is an emerging trend back to valuing and using playleaders in some types of playgrounds. These include adventure playgrounds, natural resource playgrounds and hands-on museums.

CONCLUSION

- The success of an adventure playground is dependent on staffing, and on the quality of staffing. Adult contact and stimulation is also valuable in other types of play areas.

RECOMMENDATION

- We think it is important for the costs associated with staffing child play be assigned to a specific jurisdiction at each military unit.

PROGRAMS FOR REVITALIZATION AND COMMUNITY PARTICIPATION

MILITARY AND CIVILIAN

Playgrounds are used in both military and civilian settings as a part of revitalization programs for older neighborhoods. Two such programs were observed at military bases.

- Ft. Hood--revitalization
- Ft. Bragg--self-help/revitalization

Unfortunately the play equipment actually installed at the two bases consists mostly of conventional play equipment. Still, the playgrounds are a highly visible and real issue around which to mobilize and organize people. Presumably an organized group that has had success with one issue, a playground, can tackle other less concrete issues with equal success.

RECOMMENDATIONS

- play areas are an excellent part of an overall self-help or revitalization program
- play areas that are a part of self-help and revitalization programs should include other play concepts, issues, and facilities than just installing conventional play equipment.
- self-help play areas should fit into a network of play

PLACES FOR ADULTS/OLDER CHILDREN

MILITARY AND CIVILIAN

Adults were present at many of the playgrounds visited although less frequently at play areas in military family housing areas than in urban areas. Typically there was a shortage of places for adults to sit in the play areas in the "turnkey" housing areas.

RECOMMENDATION

Adult-child and older child-child interactions are developmentally important and activities and furnishings, like seating, or close ballgame areas, that attract and encourage these contacts should be an organizing concept in a play area design.

WATER IS SEDUCTIVE

MILITARY AND CIVILIAN

While water and water play was not a part of any military play area visited it was a large ingredient in almost all of the civilian play areas. The power of water as an element of play was observed everywhere it was available including indoor play at several child care centers.

RECOMMENDATION

- Water play should be a part of play areas in family housing areas.
- Water play should be a part of play and outdoor activity areas at child care facilities.

IMPORTANCE OF TURNKEY-TYPE INCENTIVE PROGRAMS

MILITARY AND CIVILIAN

The requirement in "turnkey" housing proposals to include play areas has clearly been responsible for the availability of play experiences and the ambience of the neighborhood at housing areas on several bases. While no civilian play areas were the result of incentive programs, New York City has had excellent success with incentive zoning for office, commercial and urban design projects.

One problem was observed at Ft. Bragg which may be typical elsewhere. The Comanche II housing area benefits from having play areas. Comanche III does not have play areas even though they were a part of the "turnkey" submissions. They were eliminated as a cost saving feature.

RECOMMENDATION

If playgrounds are to be evaluated as a criteria of proposal selection, regulations should be written so they cannot be categorically eliminated to save cost later on.

BALL PLAY

MILITARY

Almost none of the play areas in family housing areas included any special provision for ball play. There were neither good grassy areas for football, soccer, baseball, kickball, etc., nor were there paved areas for streetball play like four square, kickball, basketball, jacks, etc. The children interviewed at the bases were keenly aware of the quality of grassy areas if there were any, especially if they were rocky.

CIVILIAN

Many of the civilian facilities had hard play areas.

- Lauder
- Central Park Community
- Harbourfront Adventure Playground
- Irvine Adventure Playground
- Mary B. Connolly Playground
- St. Francis Square

RECOMMENDATION

That play areas in family housing areas should include places for ball play. There should be both grassy fields and hard surfaced ball play areas.

LAYOUT OF "TURNKEY" FAMILY HOUSING AREAS

MILITARY

The general pattern of layout observed in the newer "Turnkey" family housing areas is a modified Radburn plan (Urban Land Institute, 1960). Key elements of a classic Radburn plan are compared to "turnkey" projects in the following chart.

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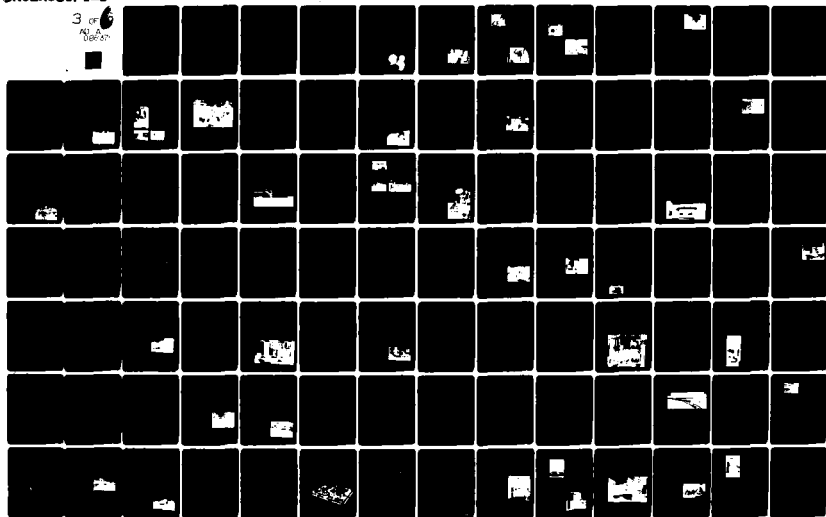
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Page 1



ISSUE	RADBURN	"TURNKEY" PROJECTS	NOTES
1. Super block	yes	yes	Ft. Hood, Ft. Bragg, Bolling Air Force Base, Ft. Meade, Ft. Lewis
2. Single purpose roads	yes	variation	Instead of single purpose roads military bases have a hierarchical road system with prime, collector, neighborhood collector and cul-de-sacs. Some older housing areas at Ft. Bragg don't fit the hierarchical pattern and they have traffic flow and accident problems.
3. Complete separation of purpose roads (especially pedestrian and vehicular)	yes	no	Some children must cross collector streets in residential areas to reach other areas. Some overpasses are available (Ft. Hood) which connect activities otherwise separated by a trunk road from the family housing area.
4. House "turned" around	yes	partial	Typically the houses at military bases had a traditional "front" on the neighborhood collector street. However, the backyards are heavily used as outdoor rooms and those yards are contiguous to the open space. Bases with housing with "significant backs" include, Ft. Hood, Ft. Lewis, Bolling Air Force Base, Ft. Meade, and Alameda Naval Air Station.
5. Park as a backbone of continuous parks	yes	usually	The "park like" quality of the public space at the "backs" of the units isn't always apparent on army installations.

CONCLUSION

- The modified Radburn plan for family housing areas is a reasonable and workable pattern especially in providing space for play and connections between play areas. But it should be modified to meet different climatic conditions, and can be sized much smaller if linked together (St. Francis Square).
- The size of family housing play areas can be much smaller, and the boundaries and links between areas can be much clearer (see discussion of St. Francis Square).

COSTS

GENERAL FINDINGS

A \$30,000 neighborhood play area like the one in Bolling's family housing area has a lot of positive impact on both kids and their parents. The kids identify with it and use it and the parents enjoy the idea of having it as an amenity.

Large impressive contemporary play areas capable of handling 100-200 children like those in Central Park can easily cost \$200,000 to \$300,000.

Less expensive play areas can also have impact. But even a few pieces of the most traditional metal equipment or the newer timber equipment can cost \$3,000-\$4,000 before installation.

Both expensive and inexpensive play areas can fail if they don't fulfil the basic criteria of good playgrounds.

Adventure playgrounds cost \$20,000-\$30,000 an acre plus yearly play leadership costs of about \$20,000.

WHAT TRADITIONAL PLAYGROUNDS DON'T ACCOMPLISH

The following chart lists the various types of playgrounds visited by the site inspection team and juxtaposes that list with a list of the basic developmental areas of children. The dots represent the relative ability of any particular type of playground to support and contribute to an area of development. While all types of play could happen in each type of playground the size of the dots show what is dominant for each.

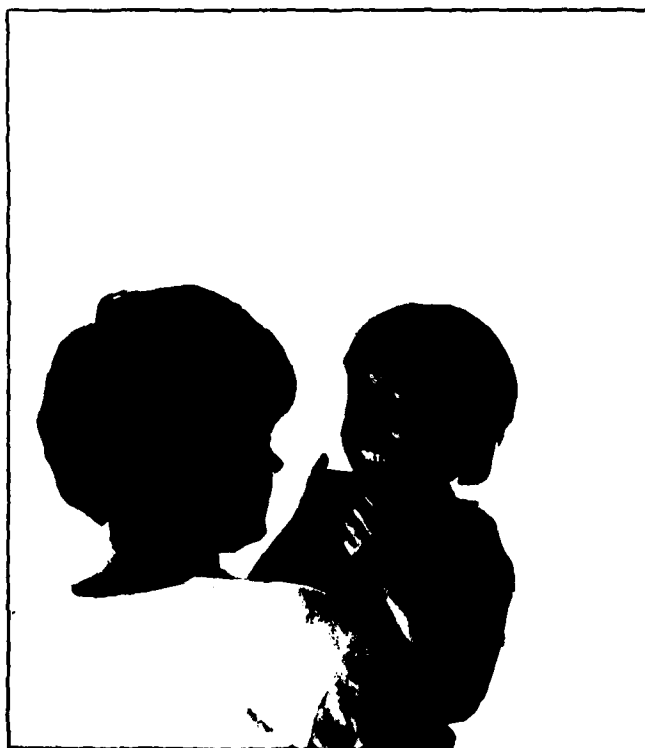
- clear/emphasis
- o some
- occasionally
- negative

TYPES OF PLAYGROUNDS

TYPES OF PLAY

	Cognitive	Social	Physical Large Muscle	Physical Small Muscle	Quiet	Programmed
1. Immediate Neighborhood "back and frontyard"	o	o	o	o	o	
2. Traditional Equipment Playgrounds (Turnkey and Ft. Hood)		o	●		-	
3. Contemporary Equipment Playgrounds (Bolling A.F.S., Central Park Playgrounds)	.	o	●	.	.	
4. Natural Play Areas (Washington Environment Yard)	●	.	●	o	●	o
5. Hands-on Museums (Brooklyn Children's Museum)	●	o	o	●	o	●
6. Adventure Playgrounds (Harbourfront, Irvine, Huntington Beach)	●	●	●	●	●	o
7. Comprehensive Playgrounds (Irvine, Mary B. Connolly)	●	●	●	●	●	●

CHILD SUPPORT FACILITIES



FORT BRAGG ARMY BASE NURSERY VILLAGE

BASIC DATA

Client	United States Army
Address	P. O. Box 122 Sicily and D Streets Fort Bragg, North Carolina 28307 (919) 396-2856
Director	Hazel Dunn Miller
Architect	Anonymous
Date	1940s (currently being remodeled)
Users	330 daily, 290 at one time; 170/day in preschool M, W, F, or Tu, Th; 160/day in daycare
Size	19,526 sq. ft. total daycare and preschool
Cost	Not known
People Interviewed	Hazel Dunn Miller, Director Kenneth E. Lewis, Nursery Board President Amado P. Diaz, Community Services Branch Capt. Malcolm L. Penny, Master Plans, Directorate of Facilities Engineers, Several parents and children



PROGRAM DESCRIPTION



Fort Bragg Nursery Village provides a variety of services to Army personnel families. These include: full- and part-day daycare, drop-in care, and preschool education. Their published goal is to provide a safe environment and enriching and warm-loving care for the children. The daily routine includes year-round use of outdoor areas, but the staff also bring children in for inside gym in poor weather.

The facility is being upgraded to meet state certification requirements and to receive federal benefits and additional funding in order to support low-income soldier families. (Funds cannot be used to pay fees at an unapproved facility.) The services of the facility are seen as an important part of the reenlistment program.

The Base Command has observed a general increase in working couples at the lower ranks, both military and military-civilian couples. The families use the extra pay to survive and need daycare services of some kind to be able to work. Older children (6-12) occasionally participate in the program but they have other choices that are more attractive to them.



FACILITY DESCRIPTION

The phrase "Nursery Village" adequately describes the collection of five separate buildings that comprise the center. As shown in the plans, three are connected by an enclosed walkway and the other two by a covered walkway. The facilities are in the process of a staged remodeling to meet state child care agency requirements.



The buildings range in size from just under to just over 4000 sq. ft. One 4,300 sq. ft. building is devoted to preschool. The other buildings house 6 month to 2 year olds, 2 to 3-1/2 year olds, 3-1/2 to 4 year olds, and 4 through 12 year olds.

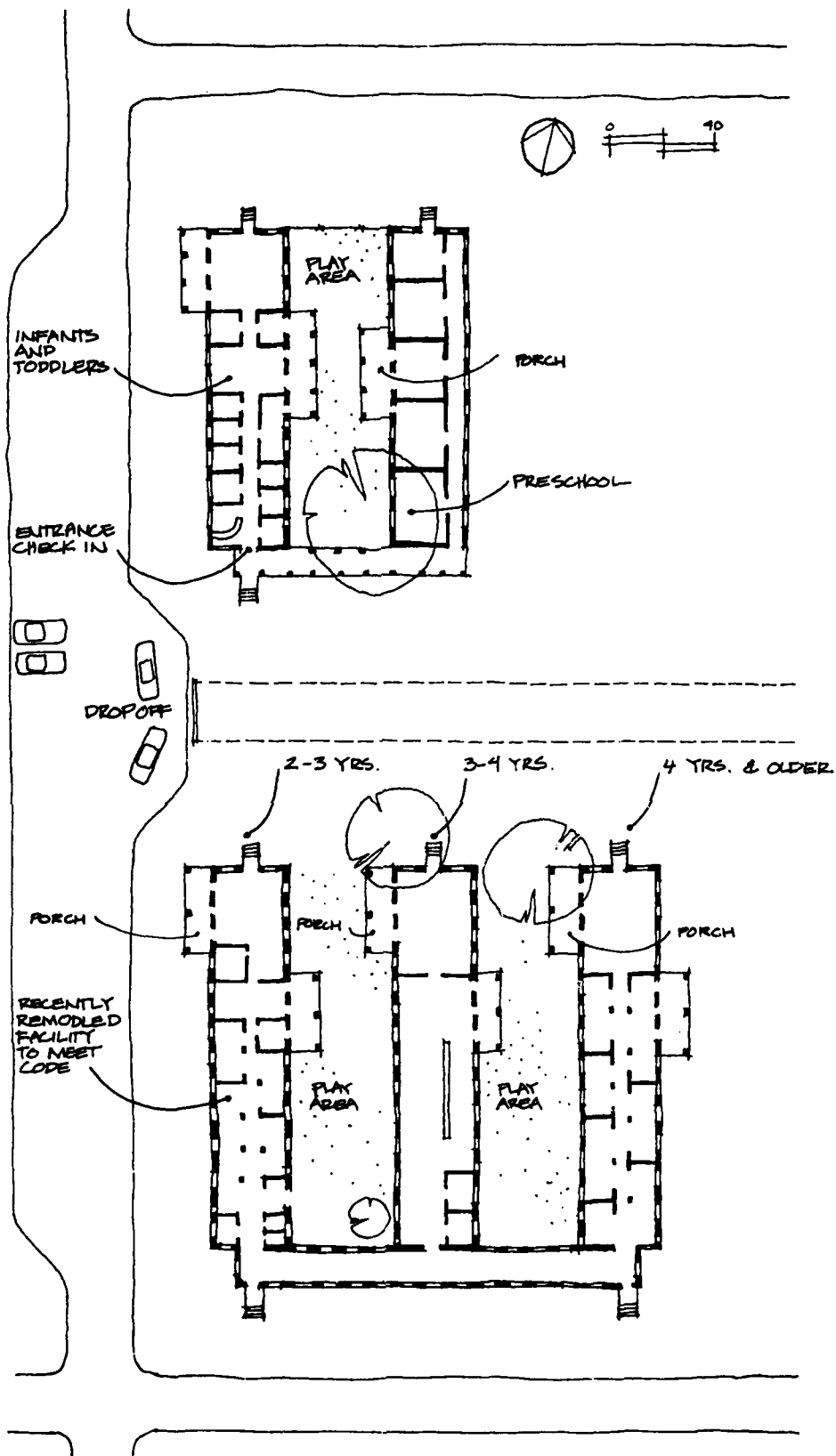
All of the buildings are of wood construction with plaster or gypsum board walls and ceilings. Each building has either a sprinkler system or smoke detectors.



OBSERVATIONS AND INTERVIEWS

COMMENTS FROM INTERVIEWS

Hazel Dunn Miller, the Nursery Village Director discussed various aspects of her facility and made a variety of recommendations for a new facility.





Mechanical Systems

Heating and cooling should be combined to give better and more efficient control. Hazel Miller recommends a system that creates warm floors especially in the toddlers areas. Individual space control for the teachers is an important moral factor. Electrical outlets are important and should be available on each wall because extension cords are not allowed. Placement should be above a wainscoting (about 5 ft.) and unused outlets should be covered.

Acoustics

Sound treatment in large rooms especially multi-use gym rooms is necessary because children get upset by a lot of noise and it starts a cycle of generating more and more noise. Clear noise separations between the nursery and the other spaces and between the entry and other care spaces are needed for the same reason.

Natural Light and Views

Natural light is important to childrens' orientation and it is a symbol of energy consciousness. Windows have to be low for the children and therefore safe against falling and breaking.

Modularity

It is a good idea, she felt, to have some repetition and regularity to orient the children and reinforce their familiarity with the space.

Flexibility

Flexibility means being able to bring groups together for large group activities and to expand the building. Cross-age group interaction at meals and play times is good.

Interior Design, Finishes, and Graphics

A 30 in. high wainscot that is paintable and repaintable would be good to keep the place looking new without having to paint the whole room. Avoid dark panelling--its too moody for children. Murals, not just pictures on the walls, are nice. Vinyl walls in the dining room and in heavily-used areas like the halls are necessary. Some areas should be carpeted to support activities but for flexibility, carpeted areas should be over a finished floor not just a sub-flooring.

Storage

There should be a central, locked, food-supply storage area. Each child-care room should be self-contained including toilets and storage. A lot of storage should be built in. Children should have their own storage for coats and belongings. (When they are low enough for the children to get at, they are called "cubbies.")

Safety and Security

The Fort Bragg Nursery Village has been burglarized and it is easy to break into the current facility. An important security issue is who is allowed to pick up the children. This is a major function of the people manning the entrance desk and a centralized entry check-in place is very important.

Energy Conservation

Double-entry spaces (vestibules) are important because there is so much going in and out by all the children, especially the drop-off children. At Fort Bragg, neither heating nor air conditioning is needed for about one-third of the year, but air-conditioning is a must in the summer.

Best Aspects and Worst Aspects of the Facility

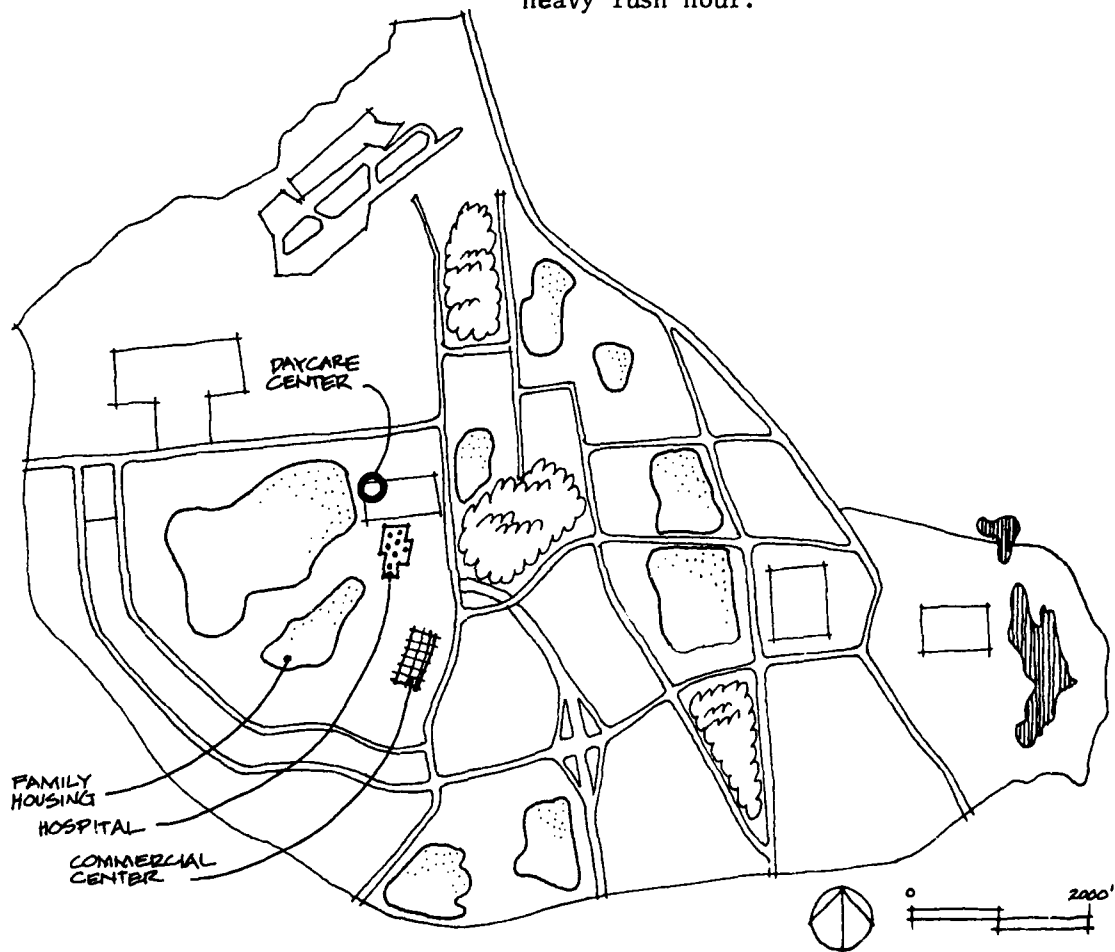
One of the best aspects of the facility is that it can be painted or remodeled pretty much as the Center requires because the Base Command doesn't make the building a prestigious showplace. The worst aspect is the lack of sheltered connectivity between spaces.

Siting Recommendations

The Director pointed out some siting considerations that would probably apply to other bases.

- At least one daycare center should be sited close to the hospital. Children aren't allowed in the hospital and one function of the daycare center is to act as a drop-off facility for the hospital.
- At least one daycare center should be near the commercial services area including the commissary and the post exchange. Since many families live on very tight budgets, payday becomes shopping day. Children slow the process down if there is a lot of shopping to do. (This recommendation recalls the "Forum" in the downtown shopping center in Columbus, Indiana that includes a large contemporary indoor playground as part of the overall shopping center design.)
- Facilities should also be located as close as possible to enlisted family quarters both because there are more of them and they tend to have children in the appropriate age groups.
- A relationship to schools is important for the children who come after school for extended daycare. Most come by bus. If there is a school immediately adjacent, they walk to the center.

- Having a site that is enroute to work for the parents is very important. Convenience, safety of drop-off places, and effects on traffic flow should be site selection and site design considerations. Very often a military husband and wife team will be dropping their children off at 6:00 to 6:30 a.m. during a fairly heavy rush hour.



The following criteria are from a review of a schematic plan the Director developed in anticipation of having a new facility:

- smallest children should be closest to the Director and the office
- a usable outdoor porch space should be included to provide for covered play space in poor weather
- there should be movable partitions in some of the spaces

- sunlight would be nice in a big glass-domed central space
- one main entry should be provided for drop-off and full-day care, but the pre-school program should have its own entry and drop-off area, in part because they pay only once each semester whereas daycare fees are paid each day; this would help the congestion at the main check-in station
- the entrance to each child-care space should be as well considered from the children's point of view, their anxieties, etc. as the main entrance and the image of the building as a whole
- a concept for the dining space might be to have it be less like a cafeteria and more like the kinds of food places that children like with booths

ASSESSMENT

Village or Campus Concept

The Director is very proud that the facility is a collection of buildings and not a single monolithic one that would overwhelm children and adults. The concept of a nursery village or campus may prove to be an important one for designers trying to control the image and personality of their designs.



Entry Desk

A revealing comment from child-care directors is the importance of the entry desk and the entry. Fort Bragg has given the issue serious consideration and like Fort Hood (next) has the welcoming person seated at eye level with the child. An additional feature is the padded edge on the desk that encourages children to lean on it and discourages parents from saying "no, no" when the child does. The following sketch dramatizes the difference that eye-level greeting makes.

Porch

The porch is appreciated as a space that provides flexibility in the scheduling and monitoring of the children. It is enough outdoors to allow children to play "outdoors" during poor weather. In nice weather it becomes an art room or special projects room. Covered porch space is desirable for all age groups.



Importance of "Cheery" Graphics

Of all the military care centers visited, this facility and Alameda Naval Air Station had the most outstanding graphics, painting, and decorating. The murals are simple, direct, and not merely a sentimental collection of "doggies and kitties" pasted as decals on the wall. The windows have been decorated to complete a carousel-theme and the whole place benefits from the fact that effort goes beyond the standard architectural solution of painting a few walls with accent colors.



Image and Reputation

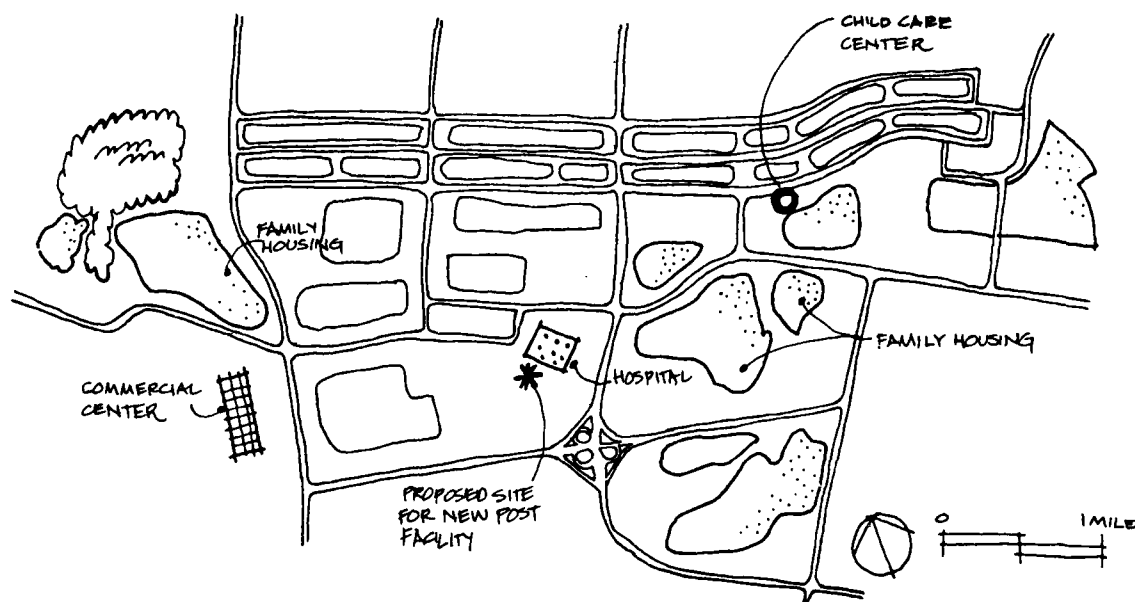
Ironically, even with the village concept and the interior decoration, this facility has to work hard to overcome a negative image. The use of converted barrack space carries with it the stigma of being second-rate and a fire trap. The quality of the program and care can't always overcome the simplicity of such a stigma.



FORT HOOD ARMY BASE CHILD CARE CENTER

BASIC DATA

Client	United States Army
Address	Building No. 415 Fort Hood Army Base Killeen, Texas 76544 (415)685-6037 or 532-5187
Date	1940s
User	269 at one time (350 a day)
Size	13,000 sq. ft. on a 3/4 acre site
Cost	Not available
People	Gurda Nahalila, Director
Interviewed	H. H. Smith, Chief, Army Community Services Several parents



PROGRAM DESCRIPTION

The Fort Hood Child Care Center is primarily a drop-in facility providing full-day care to military and civilian employees at Fort Hood. Age groups include infants and toddlers, preschoolers, and a few children up to 10 years of age. The staff receives annual Red Cross training, participates in internal orientation sessions and workshops, and about 10% of the staff is enrolled in or has completed a C.D.A. (Child Development Associate) program.

PHILOSOPHY

The daily greeting and welcoming to the center is an important part of making the transition from home to day care. The check-in person sits at eye level to the children and greets them first--and almost always by name--when they enter the facility.

Positive aspects of the program are the volunteer self-initiated staff training program and the focus on loving and affection given the children.

Program Features Unique to Military Bases

Personnel administration is not directly under the Center's control and changes are sometimes made without their participation. Army Regulations control the operation of the Center.

Provisions for the Handicapped

Children with handicaps are integrated into the program but the program is limited in what kinds and severity of handicaps it can accommodate. No regular programs for handicapped children has been established.

Non-Users

People don't use the facility for a variety of reasons including cost, the lack of a fully developed educational development

program, and, in some cases, worries about appearance and fire safety. Some others don't use the facility because it is frequently full and they get turned away. Infant drop-in care is the area of greatest demand over current available space.

FACILITY DESCRIPTION

CONCEPTUAL ORGANIZATION

Linked Buildings

Like most base child care centers, this one is located in remodeled space. The facility is in three linked buildings. Remodelling provided covered access to all the buildings and thus there is no major traffic through the playrooms.

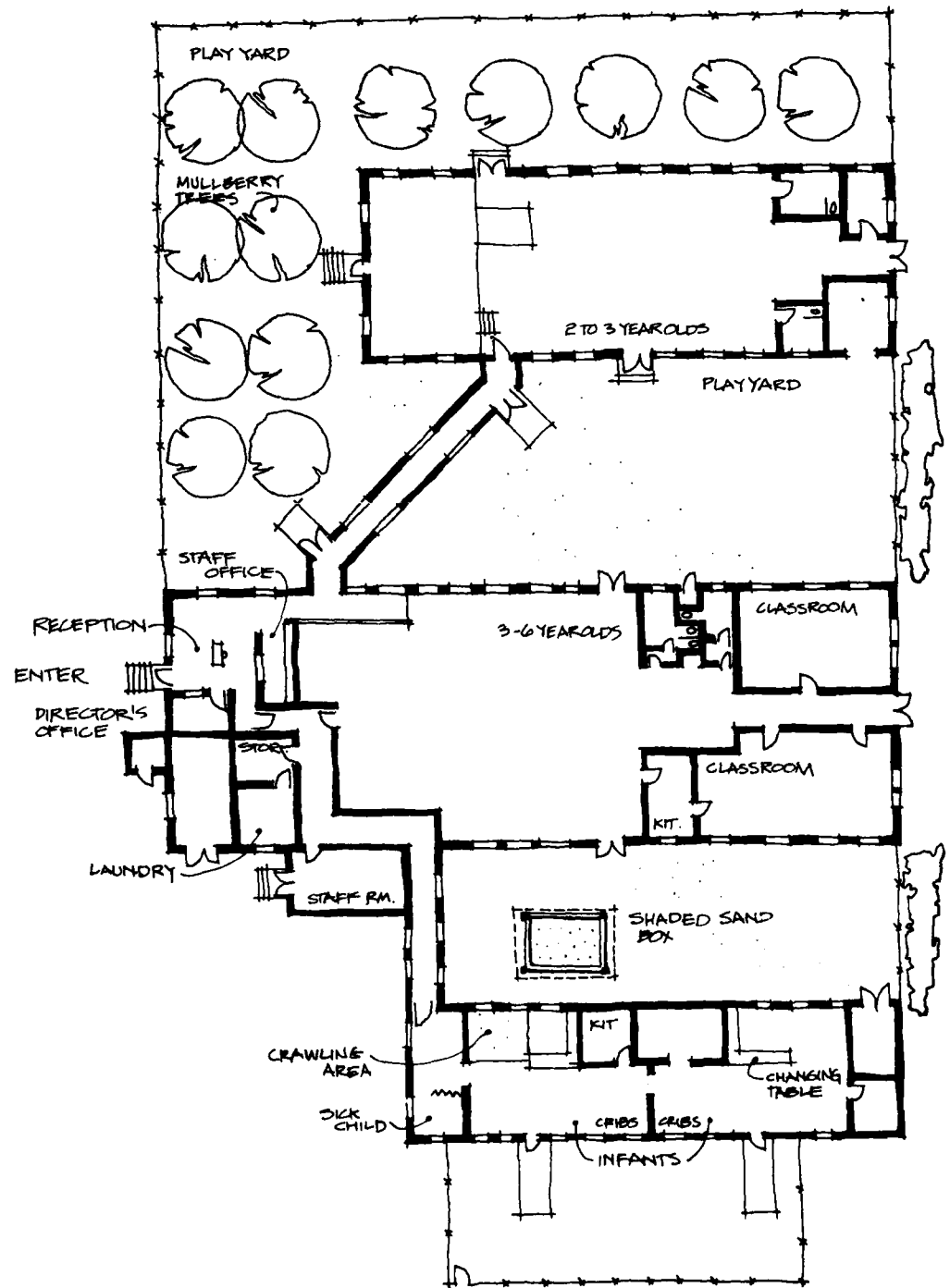
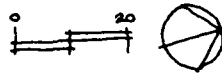
Zoned-Separated Use

One building is for infants, the other two for preschoolers. Each has its own (second) check-in station. The outdoor playyards are between the buildings.

Central Entrance Control Point

Everyone checks in at the entrance to the facility before being taken to their appropriate rooms.





INDIVIDUAL SPACES

Director's Office

The Director's office is in an excellent location, right next to the entrance and directly off the lobby. It provides the opportunity to help the staff handle a problem situation, money, and other special issues.

Laundry

The laundry is a heavily-used room for frequent washing including bibs and rags.

Infant Room

The infant room has a well-designed changing table and conveniently-located storage cubbies for each child's disposable diaper-supply. The changing tables are relatively high to reduce staff backaches.



BUILDING SUBSYSTEMS AND FURNISHINGS

Acoustics

The acoustics deserve special mention because there is virtually no acoustic control in the building. In fact one room echoes terribly and even a little noise from play is amplified.

Windows

The windows, as in most remodeled facilities, are too high for children to be able to look out.

Safety and Security

Doors lead directly to the outside and ramps are provided from the infant area so the cribs can be rolled outside in an emergency. Because they are accessible under the building, vandals have cut the telephone wires several times, making the building unsafe through a lack of emergency communication. Occupants of several buildings near the day-care center have been held up, and there is concern about possible robbery.

Play Area Location

Play areas are next to the indoor activity spaces and their immediately accessible location supports the programmed use of indoor and outdoor space for day care.

OBSERVATIONS AND INTERVIEWS

COMMENTS FROM INTERVIEWS

- storage of food should be separate from storage of linen
- we like our child-scaled picnic tables as regular indoor furniture
- staff lounge should have its own toilet nearby
- staff needs some kind of locked storage for coats, purses, etc.
- soda machine is nice for the staff, or a small refrigerator
- a big center needs lots of toy storage space
- home-care centers should be developed that provide temporary home-care (and Foster Care) for families

- the design guide should reflect the latest information and new trends in child-care and early childhood education

Worst Aspect of Program

The problem of mixing full-day care and drop-in care in the same space was mentioned vociferously.

Worst Aspect of Facility

The plumbing is completely inappropriate for the facility. There aren't enough fixtures and the present ones don't function properly.

Site Choice Criteria

Child care facilities should be centrally located. Proximity to a hospital allows one to be used for drop-off care by people visiting the hospital. One should also be close to commercial activities like the P.X. for drop-off while shopping. At Fort Hood almost everyone will be arriving by automobile or bus.

Comments from Parents

A child care center should have adequate space for the following:

- a variety of activities
- preparing and serving food
- a designated area for naps and rest
- a separate, isolated space for children who are ill and waiting for parents
- a staff lounge for the workers
- a coat storage area for workers only
- a designated area for television viewing only

Comments from Pre-Design Conference

- interior design should parallel facility design
- low-maintenance floors means no waxing
- children's equipment that comes in on the lowest bid doesn't last as long as well-built equipment
- problems with sealed air-conditioned buildings because of the frequent times the equipment either doesn't work or is shut down for energy conservation
- all day care facilities should have their own HVAC systems, both administratively and mechanically separate from base-wide rules and systems
- parking and driveway configuration is a major design problem--it is important to control congestion and provide safety for both buses and cars
- covered play areas with protection from rain and sun are desirable
- some furniture should be adult-scaled, e.g., high-chair height is important when a staff member feeds 20 or more children while on her feet; pick one high enough so adults don't have to lean over to feed them
- centers need a good intercom system
- in infant areas all care should be capable of being provided without the care giver leaving

ASSESSMENT

Large Room Syndrome

According to a recent HUD-sponsored study, child-staff interaction is less frequent in large rooms with many children while staff interaction is more frequent. The study suggests there is a serious decrease in the quality of child care when adults don't focus their time on interactions

with children. This phenomenon was observed for all age groups, including infants, at Fort Hood. While the staff and the program are being developed to encourage infant stimulation and early childhood development, the large undifferentiated spaces will predictably continue to inhibit these efforts.



The very hearty mulberry trees the Director planted 11 years ago are a good reminder that a planting plan can contribute to the overall quality of a facility in just a few years.

FORT LEWIS ARMY RESERVE CHILD CARE CENTER

BASIC DATA

Client	United States Army
Address	Building T-2166 Liggett Avenue Fort Lewis, WA 98433 (206) 967-3781
Director	Susan Bowlin
Engineer	Directorate of Facilities Engineering/Fort Lewis
Date	1940s, conversion in 1973
Users	Children ages 3 mo.-12 years, mostly 2-6 yrs., cross-section ethnically and economically; families of young officers, young enlisted, and civilian employees. 200 average at one time; 260 capacity; overflow up to 315. 2000 different children pass through the center in a typical month. 2 administrators, 5 supervisors, 5 assistants, other on-call, part-time staff.
Size	18,000 sq. ft. plus ca. 26,500 sq. ft. outdoor playspace on a 3 acre site
Cost	Not available
Interviewees	Susan Bowlin, Director Marlene Scavo, Past Director, and now Director of the Fort Lewis HEW Study Betsy Diffendal, Consultant from Anthropology Department, Evergreen State College Also present: Marla Bush, Community Services Officer, Office of the Adjutant General, Washington, D.C.

PROGRAM DESCRIPTION

PARTICIPANTS

Children

The children at the Fort Lewis Child Care Center are dependents of active duty or retired personnel and of civilian government employees. They range in age from 3 months to 12 years, with most being preschoolers 2-6. Very few have any handicaps or learning disabilities. They represent a cross-section ethnically and in terms of family income. Most are children of young officers, young enlisted, and civilian employees in that order.

The Center accommodates 200 children at a time, with a capacity of 260 plus additional overflow on special occasions, like New Year's Eve (up to 315).

In a typical month, 2000 different children pass through the Center.

The child groupings and staff/child ratios are as follows:

- infants: 1/8, ave. 1/6
- 2 to 3 yr. olds: 1/12, ave. 1/10
- 3 to 4-1/2 and 4-1/2 to 12 yr. olds: 1/16, ave. 1/15



Staff

A minimum of 2 supervisory-level staff open the Center. Other staff are called as needed. The staff is comprised of a Director, Assistant Director, 5 supervisors, 5 assistants, and other part-time on-call staff. The level of education varies from high school through M.A. degrees in early childhood education plus in-service training. The part-time on-call staff have a minimum of 1 full-day training. Many staff hold Red Cross First Aid Certificates. Professional consulting and staff training is provided through an affiliation with Clover-Park Vocational Technical Institute.

Hours

Though having many children who are regulars, the Center operates on a drop-in basis--no prior appointments are needed; parents simply drop their children off. An escort service is also provided for after-school children coming to the Center from Clarkmoor Elementary School and the Fort Lewis Pre-School, both on base. Hours of the Center are as follows:

Monday-Thursday	6:30 a.m.-11:00 p.m.
Friday	6:30 a.m.- 1:00 a.m.
Saturday	9:00 a.m.- 1:00 a.m.
Sunday	Closed

Other hours include Sundays and holidays by appointment.

Remarkable features of the program are its ability to handle and manage the ebb and flow of children and the tremendous number of children without necessity of prior appointment, and still to maintain a calm, loving, developmentally-oriented atmosphere. As children arrive exceeding the desired staff/child ratios, more staff are called in, and arrive within 30 minutes. As children leave, staff go home, perhaps to return later in the day.

Fees

Fees are set on a complicated scale but never more than \$.60/hour, with reductions for extra children from the same family, full-day participation, weekly and monthly rates.

Staff salaries account for 80% of the budget. Due to the on-call system of staffing, the Center is self-sufficient.

PHILOSOPHY

The Center works on an open, eclectic philosophy serving all the needs of children. The Parent's Bulletin sums it up: "Arrival and dismissal decided by you, the parent, and essentially self-directed play in between." After signing in, parents take the children to their room and are encouraged to talk with the staff and spend time with their children. Children are provided with a full range of developmentally-appropriate opportunities in the form of "interest centers," daily and weekly events, special events, monthly celebrations, field trips, art weeks, picnics, etc.

Though the Center is committed to providing a healthy, safe environment, and with good nutrition for the children, the primary goal is clearly to provide developmentally-enriching experiences and warm, loving care. The interviews indicated a slight emphasis on creative activity, language development, social skills, music, fine-motor development, and the development of self-concept.

No academic programs are offered. There is a formal academically-oriented preschool at Fort Lewis, but unfortunately it was closed and no provisions were made for us to see it or talk to its staff. The Preschool and Child Care Center are quite separate geographically, organizationally, and apparently philosophically.

For the parents, in addition to encouragement to talk with staff and play with their children and their friends, there are also parent seminars, supervised informal observation and discussion of their child's activities and development, and, if necessary, a referral service to outside agencies.

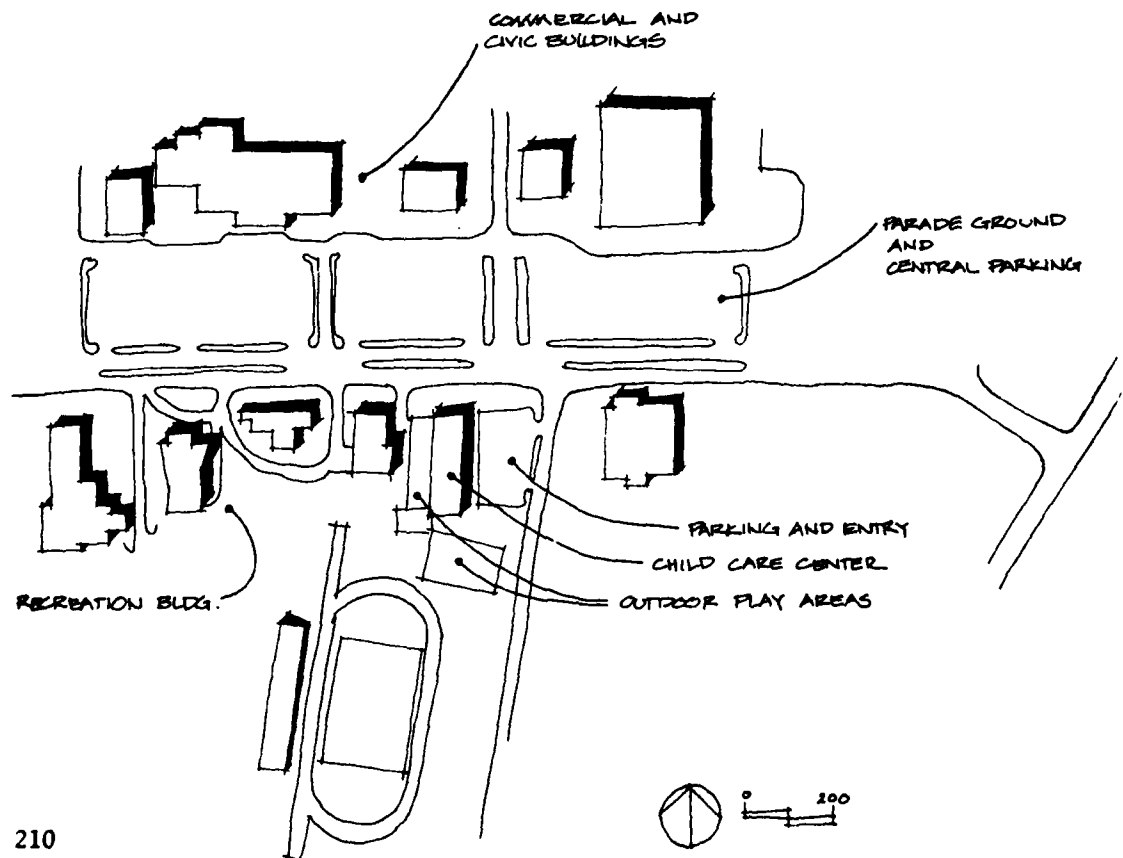
According to the staff interviewed, the most important parts of the program are the open, child-centered philosophy, flexibility to the needs of children, the on-call staffing system, financial self-sufficiency, and the warm, caring relationship of the staff for each other and for the children despite the

very large numbers of both staff and children and the drop-in, part-time, on-call nature of the Center's operation. The consultant, Betsy Diffendal, also offered that the sensitivity of the Director and staff to cultural variations was a very strong aspect of the program; the staff itself is culturally varied, she said, is sensitive to children, and naturally without trying creates an uncontrived atmosphere which fits cultural differences.

FACILITY DESCRIPTION

SITE

The Fort Lewis Child Care Center is in the center of the commercial "town center" of Fort Lewis. A long parking lot and parade ground is in the center of town, surrounded on the north side by a library, cafe, garden shop, PX, bank, commissary, clothing store, thrift shop, and multi-use hall, and on the

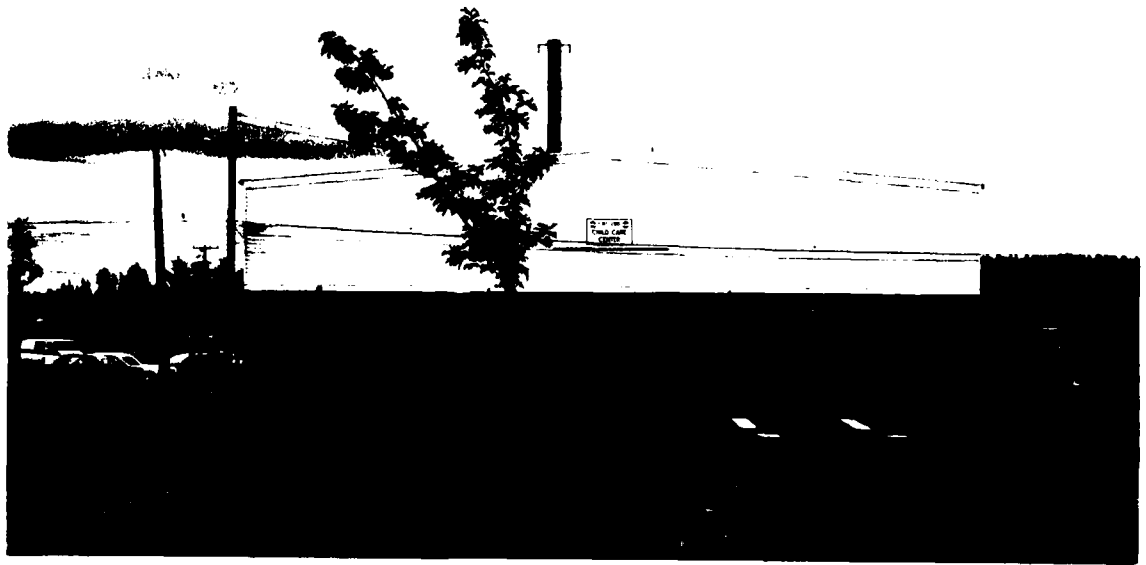


south by a theater, bowling alley, roller-skating rink, and the Child Care Center.

A street and an off-street parking lot are directly adjacent. There are no trees, and only limited other vegetation. The entry to the Center is from the parking lot.

There is a narrow play area on the west side running along the building, and a large, climatically unprotected play area to the south. Chain-link fences with barbed wire on top surround the play areas.

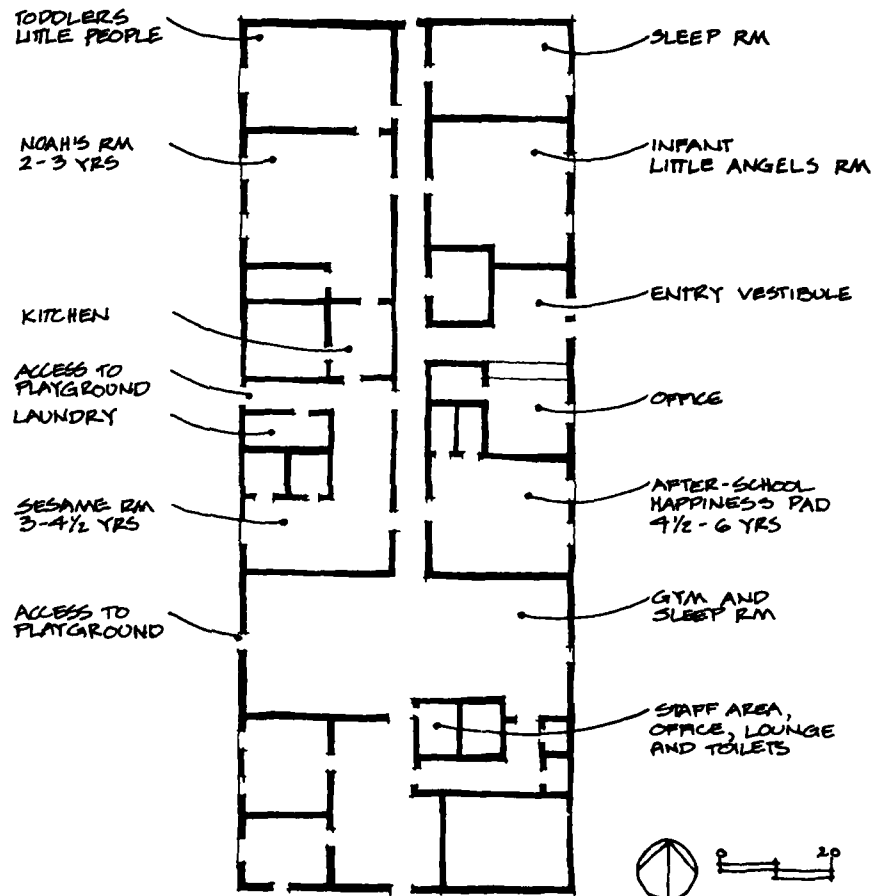
Siting to take advantage of the semi-rural quality of Fort Lewis is non-existent, and though there are lots of heavily treed areas on the base, this building and play area have none.



CONCEPTUAL ORGANIZATION

The building is a wood frame reconstructed recreation hall built in the 1940s and converted in 1973. It is 240 ft. long by 75 ft. wide (18,000 sq. ft.) with 26,000 sq. ft. of play space on an approximately

3 acre site. It is a long building with a double-loaded corridor opening at the south end into a gymnasium/multipurpose/sleeping space. Private offices and staff lounges are across the gym. The entry is midway on one side; the children pass through a lobby and then move through the hall to their rooms.

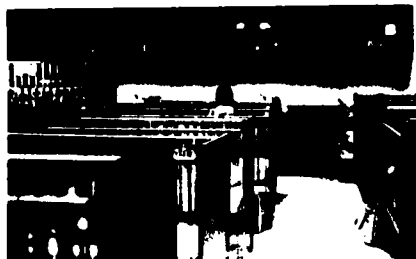


INDIVIDUAL SPACES

Children are divided into five age-group rooms:

Tiny Angels	3 to 14 mo.
Little People	14 to 23 mo.
Noah's Nook	23 mo. to 3 yrs.
Sesame Street	3 to 4-1/2 yrs.
Happiness Pad	4-1/2 to 12 yrs.

The rooms don't interconnect; except for staff movement, all circulation is by the hall.



Food preparation and eating was a designated space in each room. In most cases this took 1/3 of the area, except in the infant room which used half the space for cribs and half for two crawling areas.

The outdoor play space is accessible from the gym, the staff area, and one passage-way between storage and laundry rooms. The play space is in two parts: a narrow grass strip running along the entire west side of the building, and an open, exposed square area to the south. Little equipment is available, is scattered, and is of the traditional metal kind.



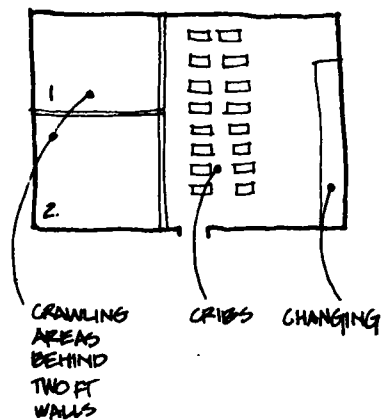
BUILDING SUBSYSTEMS AND ELEMENTS

Natural light and views are minimal. Walls are all washable. Toilets are child sized. The infants' changing area, sink, and disposal system are specially designed. Storage is minimal. There are few adequate display spaces. Ceilings are 14 ft. throughout, with overhead fluorescent lighting (on all the time in the infants room, even when napping), and no task lighting.

OBSERVATIONS AND INTERVIEWS

Due to the relatively short time at Fort Lewis (1 day) and the value of the interviewees (next, plus separate interviews in a later section), it was not possible to observe all spaces carefully. Some casual observations, therefore, are all that can be offered:

- Very inadequate provision for outdoor play; poor equipment, not enough of it, no overall design, poor access, poor siting; this space was understandably underutilized and when one of our team went onto the playground, he was mobbed by little children clamoring for attention, novelty, stimulation, hugging.
- No staff member was seen to actively play with the infants in either of the two crawling areas; this might be due to the separation of these activity areas by rows of cribs from where the staff congregated near the changing areas, because of the 2 ft. walls, or due to random occurrence during our visit.



- The gym double-functioned as a mass sleeping area (fold-away cots) thus preventing its use by older children for gross-motor play or by staff and others crossing it to go to offices and lounges.
- Surprisingly large groups were seen to be with staff members (in one case 15 or so to one staff member); the rooms were not functionally well-differentiated into activity or interest centers, and internal circulation was not well differentiated from activity.

COMMENTS FROM INTERVIEWS

The staff and others present for the group interview were generally pleased with the location of the Center and its indoor facilities, though not with the outdoor areas. Some highlights:

Location

The location near the center of the town, near commercial facilities, and on the main bus lines was seen as a definite advantage.

Size

The largeness of the Center didn't bother anyone. Though they are somewhat in favor also of smaller, neighborhood-based family day care centers, they felt there were potential problems of safety in unconverted barracks and that family day care centers were perhaps better for evening care.

More space for activities was seen as a real need (the present size is 50 sq. ft. of usable space per child when the normal 200 children are present, or 38 sq. ft. per child at capacity of 260).

Soft and Private

The staff complained about a lack of quiet private spaces for one or two children, and that they were not allowed to have soft pillows, over-stuffed chairs, stuffed toys or other warm, inviting furniture and materials.

ASSESSMENT

STRENGTHS AND WEAKNESSES

The overriding strength of the center is in its program, staffing arrangements, range of activities, responsiveness to cultural diversity, convenience for parents (drop-in), low-cost, and financial self-sufficiency. It is the subject of a current HEW/DAAG demonstration and documentation project.

All things considered, the strengths of the physical facility seem to be its central location, adequate size (50 sq. ft./child under normal conditions), excellent entry sequence, and separation of age groups. Weaknesses include the outdoor play areas, lack of any indoor-outdoor connection, poor site design, uninspiring renovation, non-child-scaled spaces (14 ft. ceilings, high windows, etc.), lack of clearly defined activity spaces in rooms, very low utilization of the gym-multipurpose room (isolated at one end of the building), inadequate storage, and poor placement of the staff areas (private, but the only access being across a space frequently used for mass napping).

LESSONS

- at least partial separation of rooms allows children of different developmental abilities to focus on activities appropriate for them; in a large center this may be necessary (though other evidence points in the opposite direction for smaller centers)
- location near where parents can easily drop-off children, including those using public transportation
- siting should--and can--respond to local and natural cues
- a change in exterior image can be valuable in communicating a radically changed function for a building
- spaces should be child-scaled

- outdoor play spaces should have easy access to and from indoor play spaces if they are going to reach full utilization
- a clear entry lock aides in control of perhaps unwanted adult entry, and in efficient processing of children before entering activity rooms
- multipurpose spaces are underutilized for activities if they are removed from other activity spaces and if they are forced to double-function as sleeping areas
- main activity areas, care areas, and places where staff may congregate should be intermingled in order to discourage any possibilities of ignoring children, especially less-demanding infants and children
- activity spaces in rooms should be functionally differentiated from each other and from circulation paths

CONCLUSION

This facility, like many other Army Child Care facilities, is hampered by being housed in a very old building not designed for its present use. This is piecemeal renovation, which is done thoughtfully and addresses the most pressing needs, but in general the facility is constraining. Playground access from the primary rooms is cumbersome, and there is little natural light. The rooms are not rich with developmental equipment, nor do they have quiet spaces for children to withdraw in or well-defined separation of activity from circulation.

There is no natural fit with the beautiful setting present on the base, but the location close to the commissary and center of town is very convenient.

FORT MEADE ARMY BASE CHILD CARE CENTER

BASIC DATA

Client United States Army

Address 14th and Chamberlain Streets
Fort Meade, Maryland 20755
(301)677-3407

Director Barbara J. McGinness

Date 1940s

Users Daycare children of 6 months to 5 years
of age and casual care of 6 months to 12
years; 172 maximum, 75-100 average per day

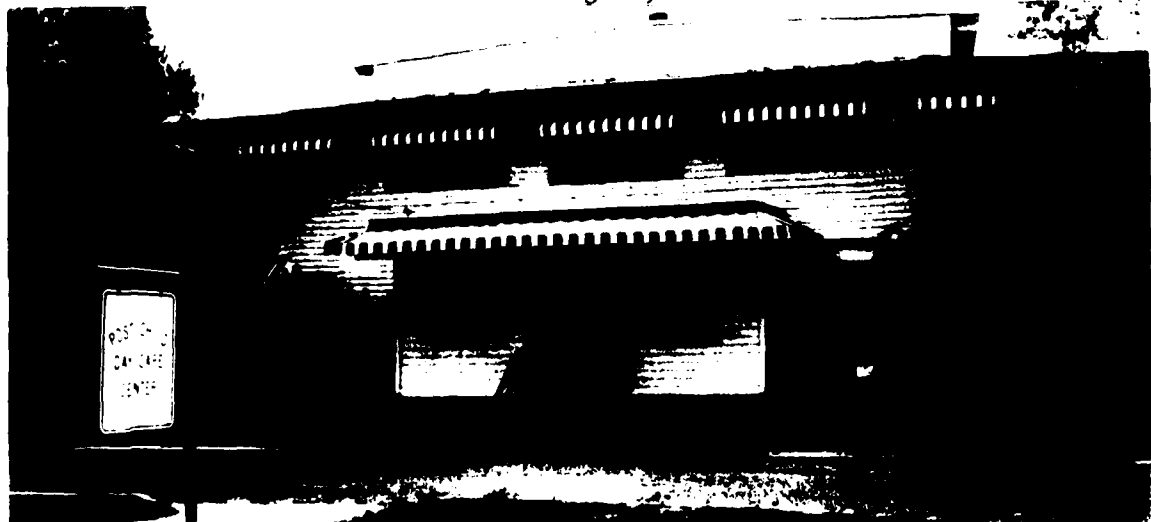
Size 5200 sq. ft.

Cost Not available

People Barbara J. McGinness, Director

Interviewed Captain Frank J. Klarnet, Personal Services
Division
Georgianna H. Price, Superintendent of
Volunteer Army Community Services
Major Delbert L. Collins, Army Community
Services
J. E. Parks, Assistant Army Community Services
Officer
Marie Locke, Director, Pre-School Facility
Mrs. Mead, Base Master Planner
Several parents

Also present: Marla Bush, Community Services
Officer, Office of the Adjutant General,
Washington, D.C.



PROGRAM DESCRIPTION

The Army Community Services at Fort Meade has three separate programs for children:

- special program for the handicapped and mentally retarded
- preschool program
- child care program

Special Program

The special program for handicapped and mentally retarded children is the only one at an Army base in the country. It serves about 35 children with a wide age span (4-21 years). Service personnel with special children frequently request assignment here because of the variety and quality of medical support available in the immediate region of Baltimore and Washington, D.C.

Preschool Program

The preschool program, called the Little Red Schoolhouse, is an independent program of formal preschool activities for several hours a day. Some children commute from the child care center by bus to and from the preschool. The existing program is housed in several remodeled WWII barracks. An additional building is being remodeled into a daycare center for the 20% of the preschool children also needing before and after-school care. The preschool has its own director and staff.

Child Care Center

The child care center provides full-day and drop-in services for its base. The program provides services to several age groups including infants, preschool-age children, and school-age children before and after school. Children are considered to be participants in the child-care rather than drop-in program if they are in the facility more than 25 hours a week.

Child Care Program Philosophy

The primary goals of the child care program as stated by the director in a parent's pamphlet are to provide "a safe and healthy environment, enriching experiences, and warm special care for your child."

An infant stimulation program is scheduled for the fall of 1978.

For both child care and infant care, since the casual users tend to be more insecure, they need special attention. If their activities are combined with full-day care, they require time that should be given to the full-day children. The caregivers are acting as "parents" for the full-day children because of the amount of time they spend there. Thus this Center seeks to develop separate programs for full-day and drop-in users.

The program does not include a food program beyond snacks.

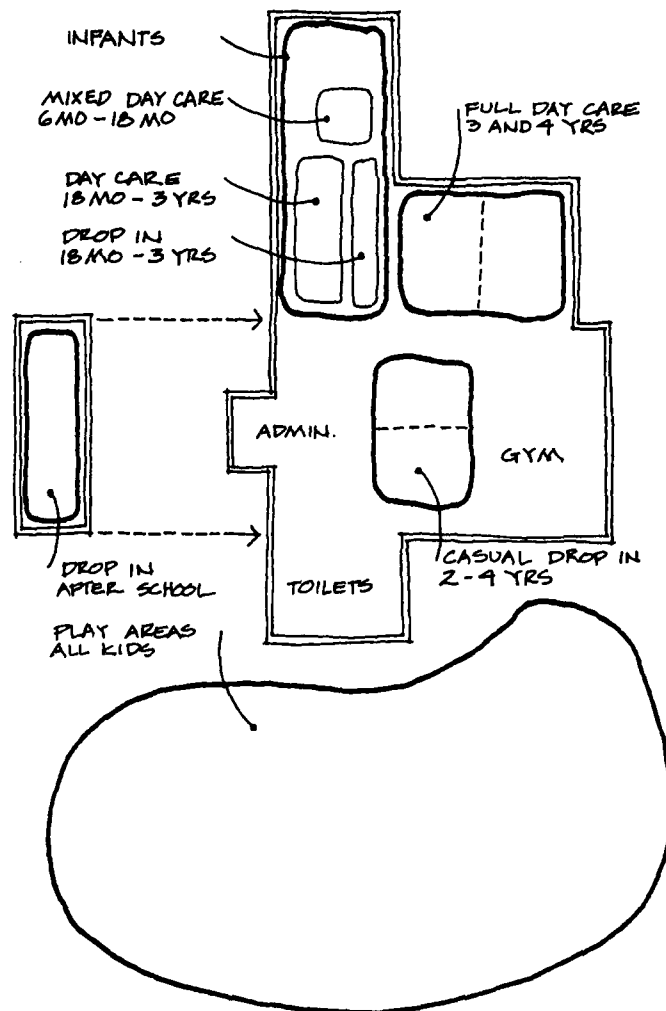
The programmed use of time includes use of outdoor areas, mostly for free play, and in bad weather the use of an indoor gym.

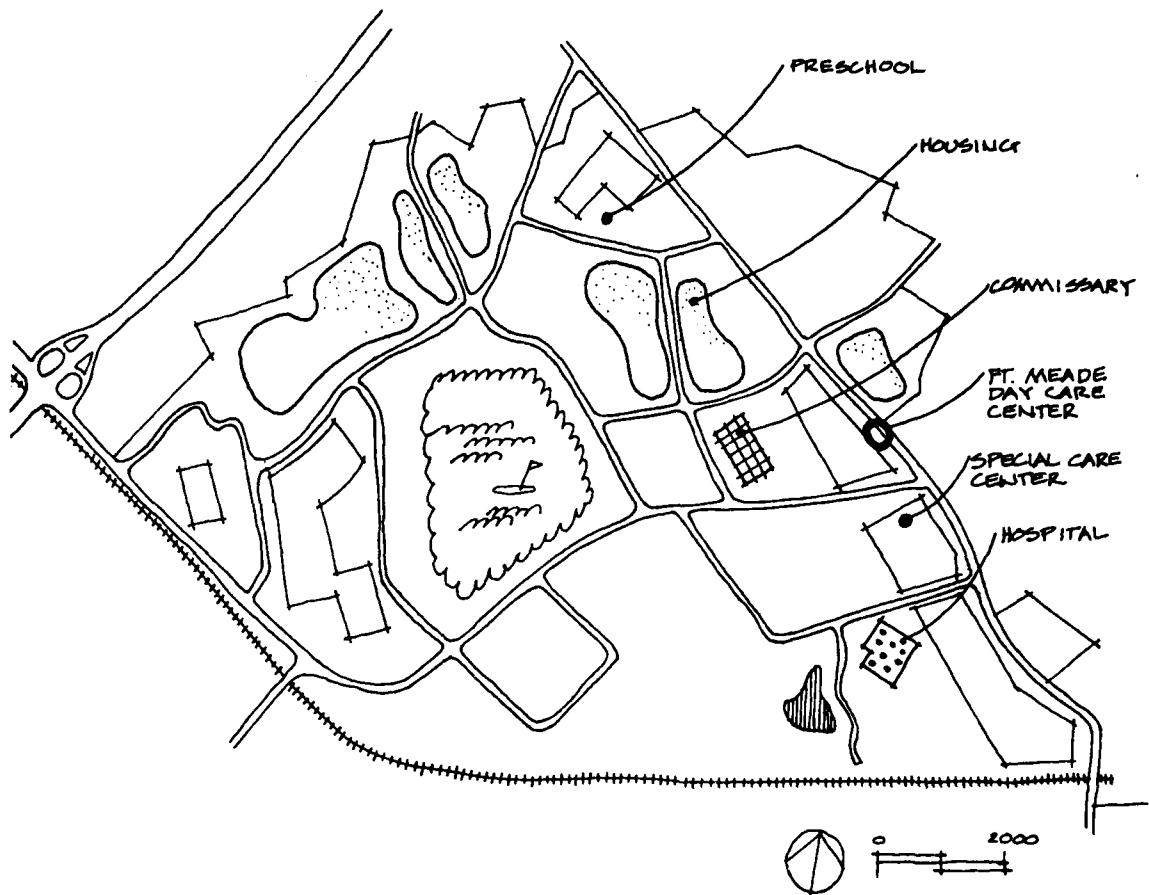
A special feature of the overall program is its special room for those school-age children who come before or after school, or even both.

FACILITY DESCRIPTION

OVERALL CONTEXT AND SITE

The facility is located in a remodeled servicemen's club at the east edge of the base between a major base road and a public highway. The highway is heavily traveled and has a high accident rate. Parents have expressed concern for the safety of the children in the playground. The long narrow site has many large mature trees and a large sandy play yard. There is an additional play yard on the site across the parking lot. It is only occasionally used. The facility has a convenient drop-off place and enough overflow parking space to handle peak times.



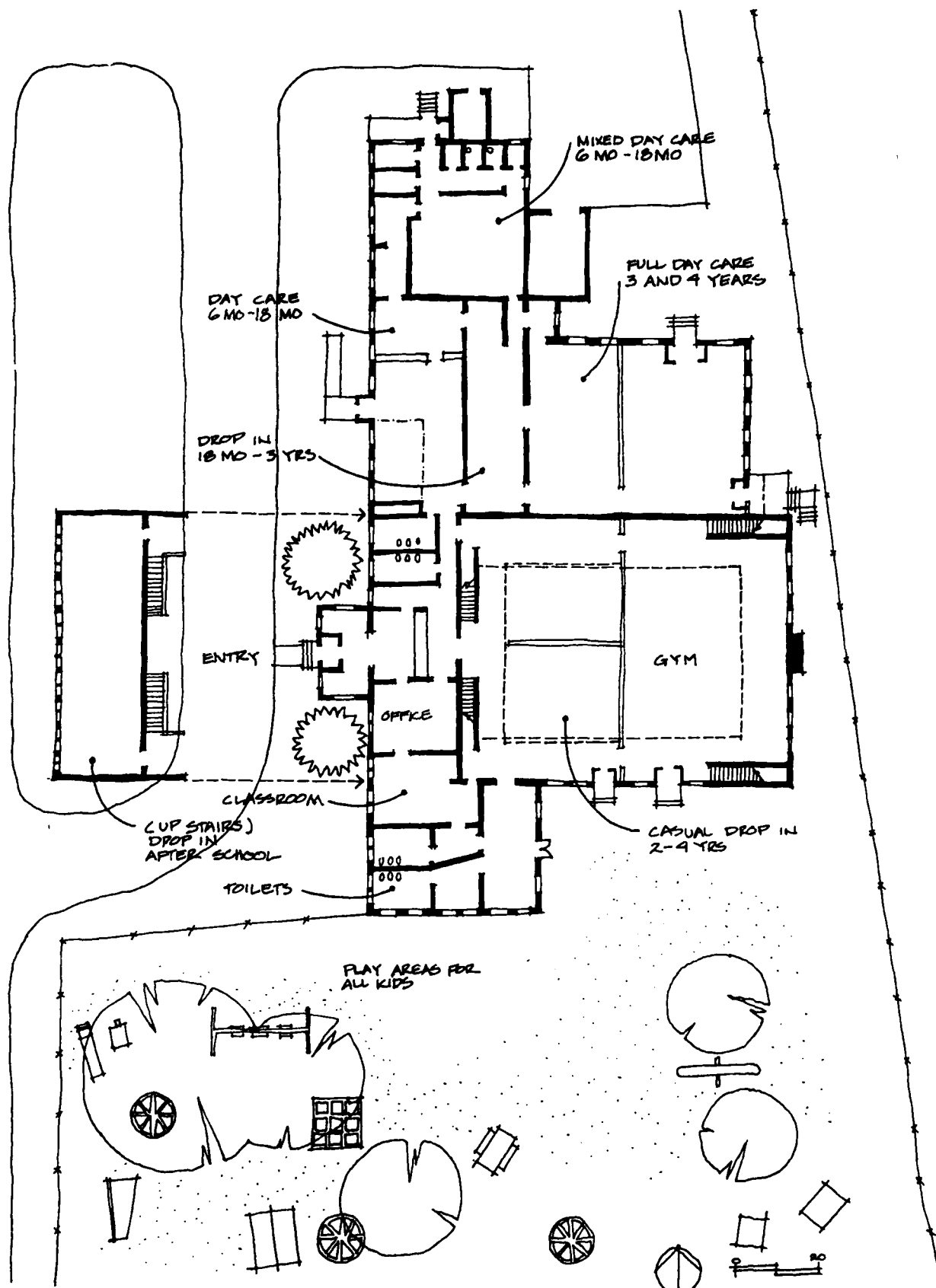


CONCEPTUAL ORGANIZATION

As shown in the plan and the diagrammatic sketch, the facility has been zoned to separate as much as possible the children both into age groups and into full-day and drop-in casual care. To the extent possible, the infant area is subdivided into 18 month to 3 year day-care and 18 month to 3 year casual drop-in care; infants from 6 to 18 months are combined.

The largest spaces have been subdivided into smaller spaces more appropriately scaled to group size.

After-school care is a separate space conceptually and in location. It is the only functional space on the second level. The children participated in its decoration and furnishing and the space is affectionately called "the den" by the users.



BUILDING SUBSYSTEMS

Structural System

The structural system is old wood trusses and wood frame. The wood trusses are good for hanging things.

Mechanical System

The radiators are covered, the building has a sprinkler system for fire safety, and the building is air conditioned with individual room air conditioners for summer comfort.

Acoustics

The acoustic treatment in the infant rooms helps control the multiplier effect of one child's noise and activity overstimulating the others.

Natural Light

None really--many windows are painted out to reduce heat gain. Others, even though they look "standard," are too high for children to see out.

Interior Design

During the site visit, the facility was in the middle of a paint-up fix-up program, the work being a volunteer effort by Explorer Scouts.

Safety, Security, and Fire Evacuation

The infant area has ramps for egress for cribs.

Energy Conservation

The existing building was insulated for energy conservation when the air conditioners were installed. The insulation was very expensive

Display Space

The caregivers and children take advantage of the open trusses and hang objects from them. In addition, the ad hoc nature of remodeled facilities allows more inventive and spontaneous decisions about display and temporary decoration to happen without upsetting anyone.

OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE

Where to Sleep?

The following discussion is about the advantages and disadvantages of locating sleeping (napping areas) in the "play room" versus in a separate room.

Sleeping in the playroom, cots (or alternative) stored in a storeroom:

Advantages:

- less total space
- less staff
- more play space

Disadvantages:

- loss of setup-time
- child must fit room schedule
- special room for storage of cots can't be used for other things

Sleeping in a designated room:

Advantages:

- fits children's individual schedules

Disadvantages:

- might require more staff (monitoring 2 rooms)
- more total space
- less usable play space
- children have to be taken to space

Playground

On this Child Care Center play area, the staff can see the children easily, but there are no places for children to hide. The pre-

sent configuration favors large-muscle development play. It seems that every center needs an indoor gym. The gym at Fort Meade is scheduled for use all day and provides a valuable play space for poor weather.

Circulation

Circulation patterns should be clear because parents need to be able to take their children to the door of the space without disturbing other activities.

COMMENTS FROM INTERVIEWS

The following is from our focused interview with the Community Services personnel on the base.

Changes in Program Use

The Child Care Center previously was used only as a drop-in center. More parent couples now work, and there are more single parents with custody of children who need full-day service. There are about 60 single parents on post. About 20-25 of these are soldier mothers.

Changes in Demand

If the Army continues a policy of "enlisted parents," the need for child care services will grow. Army policy will be the prime factor affecting future demand, they thought. There is a waiting list for both the child care services and the preschool. The waiting list would be even longer if the programs were less expensive. If the child care facility were new, larger, and less expensive, the demand might reach 900.

From an interview with the Director of the facility:

Best Aspects of Program

The best aspect of the program in the eyes of the Director is the separation of casual users from full-day users. This is important

because the caregiver is really the "parent" for children staying 8 to 12 hours a day at the center; if they are distracted by the short-range anxieties and needs of children coming and going from the facility, the quality of care for the full-day children suffers; ultimately the children suffer.

Program Changes

The center needs a more active infant program and a breakfast and lunch program which is not possible because of a lack of qualifying kitchen facilities.

Best Aspects of Facility

The building is large enough to handle the children served. The separate upstairs room makes it possible to have an appropriate place for the after-school children that they can call their own.

Worst Aspects of the Facility

The bathrooms are poorly located. They are noisy and the plumbing smells. There should be more bathrooms and they should be more central.

Location of Future Care Facilities

New facilities should never be located in heavy traffic areas, Barbara McGinness argued. They should, however, be central to the base and should be central to the destinations of parents dropping off children.

Missing Spaces

A kitchen and "cubby" storage space for children to keep their personal things in are the most missing spaces. A library space would get used because it could easily double-function as a conference space, parents room, and so on.

Location of "Cubbies"

If a facility has cubby spaces, they should be decentralized to reduce problems of loss. A centralized cloak room will guarantee complaints about lost and stolen items.

From several interviews with parents who use the drop-off services:

Why do your children come to the day-care center?

- need the service (involvement in community affairs)
- casual
- convenient

Do you know someone who does not use the facilities? Why don't they use it?

- used to have a bad reputation
- used to have a bad child-staff ratio (much better now)

Satisfaction with the present program and range of activities:

- casual day-care--satisfied
- full-day care--don't know
- preschool--very good

What do you most dislike about the building?

- overall image of an "old building"

What do you think about the outdoor play area?

- reasonable

What siting considerations should be considered for new facilities?

- central to housing
- far from highway

ASSESSMENT

Separation of Full-Day from Drop-In Care

Given that there was a worry on several bases that the needs of drop-in children take time away from the continuing needs of full-day children, a major achievement of this program is the separation of the two groups into their own programs and areas, though they share a common entry.

Large Open Spaces

Most of the program is housed in two large rooms subdivided by partitions, some high (5 feet), some low (3 feet). Although adequate visual isolation is provided by the partitions, the large rooms do not provide an adequately quiet environment where individual activities can happen without interference from other activities. The juxtaposition of the gym next to two of these areas may keep the children in those areas overstimulated with noise from the active gym area.



Indoor Gym

The designation of a gym area is seen as a major and useful accomplishment by the Director. It has scheduled use throughout the day. An active "gym" activity area for programmed use, as well as for bad-weather play, should be seriously considered as a functional space in any child care facility.

Club Room for After-School Use

Another special accomplishment of the center is the provision of a special space for the older children who come before and after school. Although they don't have their own entry, their room is isolated--it is the only facility on the second floor--and they participated in decorating and furnishing it.

Outdoor Play Area

Although the play yard is large and has a fair number of pieces of equipment, and even a play house, it is not used effectively and not arranged or zoned in a way that reinforces a variety of activities.



OAKLAND ARMY BASE NURSERY

BASIC DATA

Client	United States Army
Address	10th Street Oakland Army Base Oakland, California 94626
Director	William Mosier Consultant Contractor (in lieu of an on-site director) Center for the Study of Child Development Vallejo, California
Architect	None
Consultants	Col. Larry Wanberg Chief, Department of Social Services Letterman General Hospital/Presidio, San Francisco
Date	Unknown; renovated minimally in 1975
Users	Children of Army and civilian employees; 35 full-time children, 10 drop-in, 50 maximum at one time; ages 6 mo. to 5 years. Children of low to middle-income enlisted families, some from single parent families.
Size	5,000 sq. ft. plus 4,600 sq. ft. play yard; no additional site area
Cost	Unknown
People Interviewed	William Mosier, Consultant Contractor Col. Larry Wanberg, Consultant Lt. Cynthia Conners, Chief of Community Services (until July 31, 1978) Lt. Cheryl Worch, Chief of Community Services (after August 1, 1978)



PROGRAM DESCRIPTION

PARTICIPANTS

Children

This Army Nursery serves children of Army and civilian employees. Most are from low- to middle-level enlisted ranks, and some are from single parent families. Racially they are balanced between Black, Oriental, and Caucasian. Very few have any handicaps or learning disabilities. Age range is from 6 months to 5 years, with a very few after-school drop-ins. The center is mostly a full-day child care center accomodating an average of 35 and a maximum of 50 children. Fees are \$.75 a day for drop-in and \$1.00 for full day care.

Certain people are not using this facility. At one time it was boycotted by officer's wives. Some families cannot afford the fees, and still there are no children of officers.

Staff

This is a unique center in that it has no real on-site director but is run by an off-base consultant contractor who is hired by the community services. He has a master's degree in educational technology, some training in early childhood education, and experience in a range of early childhood centers. The resident staff are not well trained: 4 are called "learning facilitators" for the pre-schoolers; 2 are "infant caretakers." Some have teaching credentials. Staff turnover is very high, every 3 mo. on the average.

Increased Usage

Five things were seen as necessary to increase usage:

- reduction in fees
- publicity
- better staff

- improved building image--a cottage image rather than a barracks image was suggested
- attractive play yard

Mothers are said to be restrictive on the base. The playground is vacant on weekends. Apparently there is little for children to do, except beat up on each other; some hang around the Youth Center.

PROGRAM PHILOSOPHY

The program philosophy, organized by the consultant contractor, is very self-consciously child-initiated eclectic. The center is considered an environment for learning; development is considered to come from an interaction between maturation and environmental stimulation. Ideas from Skinner to Piaget, with a large dose of the human potential movement are incorporated.

Four goals are paramount in this program:

- development of mutual respect, including staff-child interactions
- language stimulation
- development of self-concept
- sensory stimulation for all primary senses

Field trips off-base are also used a lot. Staff training by specially designed videotapes and some group growth seminars are considered very important.

The children are subdivided into 3 age groups: Infants 3-13 mo.; ambulatory toddlers 13 mo.-2-1/2 years; and walking-talking preschoolers 2-1/2 to 5 or 6 years.

Activities

Activities for the preschoolers begin in the morning at self-directed learning stations of the child's choice. Mid-morning the staff announce some new day-long or week-long theme activities, either indoors or outdoors. Lunch is 11:30 to 1:00, with a 5:1 ratio at tables. After

clean-up the children are free to return to learning centers or play outdoors. On field-trip days, like to the zoo or arboretum, all preschoolers go together.

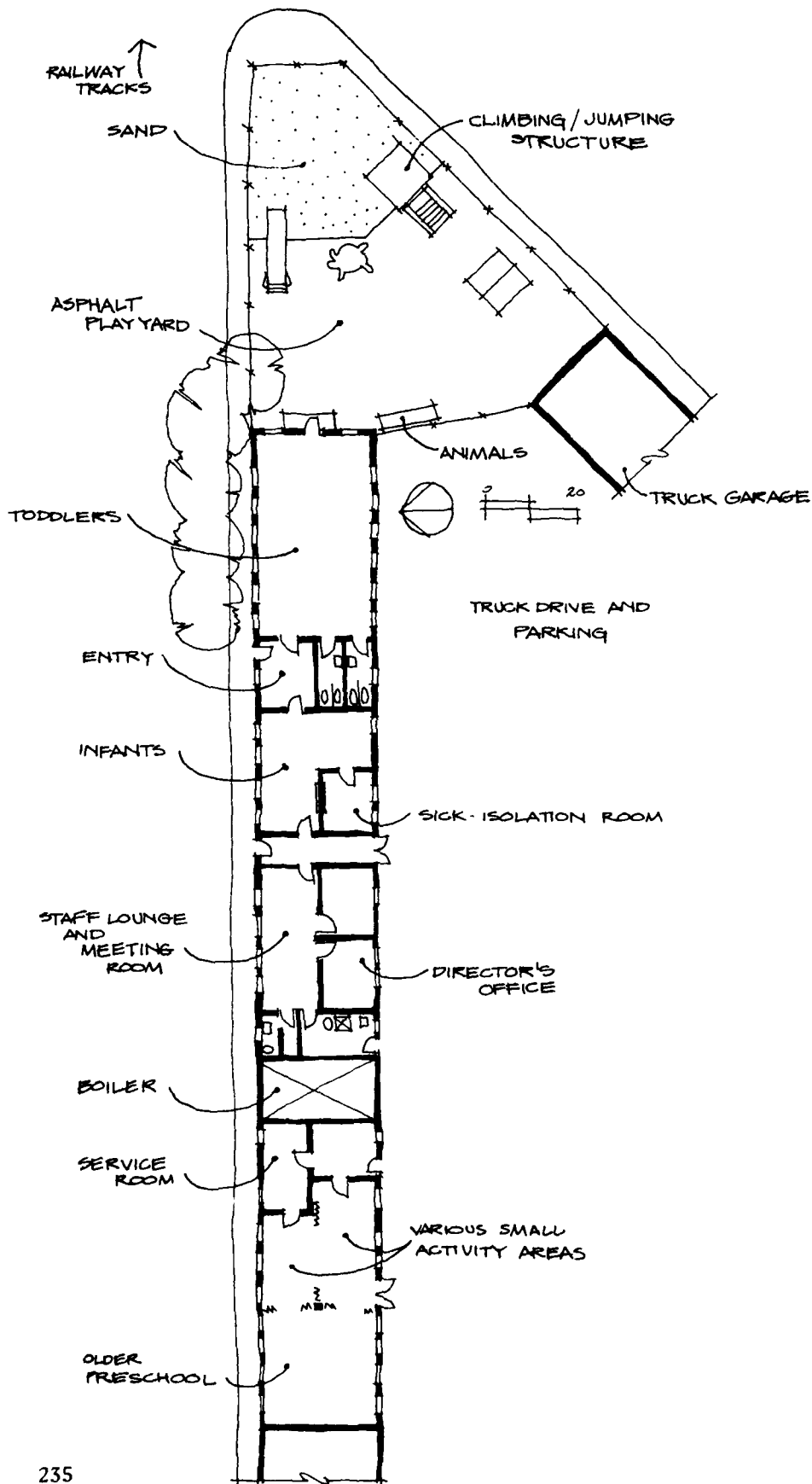


FACILITY DESCRIPTION

SITE

The Oakland Army Base is a military overseas shipping terminal which uses part of the adjacent Port of Oakland wharves and commercial carriers. Thus the base is primarily warehouses, train-to-dock transfer points, and truck unloading docks. Six blocks contain all the family housing, recreation, and offices for the 110 families on base.

The Nursery is at the south end of the family housing area, at the south end of the base. It is across a street from housing, and directly fronts the street with no set-back. On the non-street side behind a chain-link fence is a truck garage and extensive black-top. To the immediate east across a narrow dirt road are the main rail lines to the Terminal. Some limited on-street parking is available, plus a small parking lot to the east across the street. A few trees are on the north side but none on the south or near the playground.



CONCEPTUAL ORGANIZATION

The Nursery is housed in half of a very long, narrow, grey, wood-frame, one-story, pitched-roof, partially renovated barracks. The Nursery is 200 ft. by 25 ft. with two street-side entries and no internal hallways; rooms lead one to another in box-car style; and the playground is off the far eastern end of the building. Due to an internal boiler room, it is necessary to go out a back door and along the edge of a parking lot to get from one half of the building to the other, or from the older children's area to the playground.

Grouping is by age in one of 3 main rooms. Other smaller rooms are provided for staff conferences, offices, sick isolation, and coats and boots.

There is very little connection between interior spaces and the play yard, even from the room adjoining it. Windows are high, and doors are standard widths.

SPACES AND BUILDING SUBSYSTEMS

One room had folding doors for subdividing the space. Other rooms made use of "L" shapes and furniture for partial functional differentiations.

Observations about building subsystems:

- exposed electrical outlets
- unprotected gas space heater in the middle of one room
- no bathroom facilities in the infant room
- inadequate toilets in general
- one-half of one room has no lights at all (and even bulbs must be changed by the local Facilities Engineering Office, we were told)
- no special acoustic features
- no views out windows--too high and nothing to see anyway
- no large interior storage area
- no outside storage

- no attention to interior design finish, colors, or graphics (everything has been done by staff with apparently little base help)
- no special provisions for safety or security-- e.g., large hole and on exposed cable wires in the playground which no one could get the Facilities Engineers to fix, exposed heater, etc.
- building has posted map for fire evacuation, but no sprinklers as other fire prevention system
- no accomodation for the handicapped
- display space is limited
- playground was 2/3 asphalt, 1/3 packed sand with a few scattered pieces of play equipment--a play house, two rabbit cages, a jumping area (into soft foam), and a concrete turtle



OBSERVATIONS AND INTERVIEWS

Other than a few infants, children who were drop-ins, and two caretakers, all the children and staff were away on a field trip the day of our site visit.

COMMENTS FROM INTERVIEWS

The consultants and Chiefs of Community Services were all very enthusiastic about the early childhood development program being implemented at Oakland, but were very dismayed at the physical facilities. There was some indignation about the lack of Base cooperation to improve facilities. No one could say anything good about their facility, and they raised many serious objections all the way from safety features to architectural organizational considerations (linearity makes for difficult communication among staff and peer-interactions among children).

The staff, however, has done remarkably well with a poor shell--staff-and child-initiated graphics and drawings adorn most walls, plants are hanging near windows, a colorful model airplane floats over one room, and when official budget was lacking, materials, soft objects, and furniture has been scrounged.

ASSESSMENT

Special strengths about the facility are few; special weaknesses have been noted above.

The best aspects of the center are its program philosophy, staff training, and well-stocked, child-scaled learning centers.

The worst aspects are its very limited outdoor play space and inadequate equipment, the terribly inadequate bathrooms, the lack of separate, quiet napping areas, the lack of clear separation between interior circulation and activities, the inadequate box-car arrangement, the siting, and the many specific building subsystem problems listed above.

Causes, we were told, for these problems are lack of Base support, but even with existing materials, and the very good work of the staff, the minimal renovation, lack of color, lack of acoustic treatment, inadequate space differentiation, etc., show the critical importance of expert architectural design guidance in both renovation and even just equipping and setting up spaces.

LESSONS

- provide clear separation between circulation paths and activity spaces
- provide inviting access between indoor and outdoor play spaces
- elongated overall plans seem to minimize staff interactions and child peer interactions
- learning centers should be child-scaled
- washroom facilities for children should be adjacent to main activity spaces
- site location should be away from noisy, noxious and dangerous elements
- drop-off and at least some parking should be near main entrance
- a separate staff area is useful for meetings, offices, and retreat



SUMMARY

In general, this was the most depressing physical facility that the West Coast team visited. It is disjointed and totally inadequate for its new use. Its location is in a service yard area of the Base. The setting of the outdoor play area is terrible and the area itself was depressing.

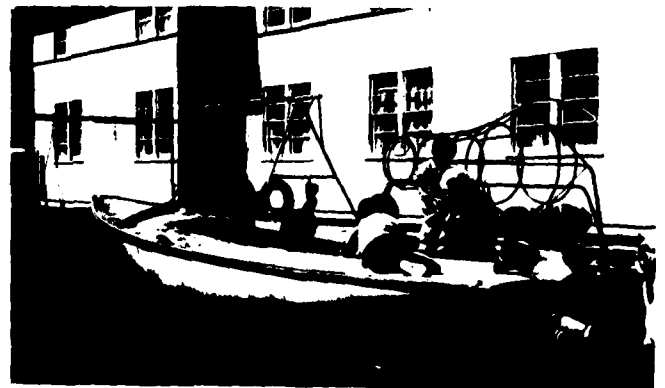
The program, however, is receiving lavish attention and, with its extremely limited funding, is well-stocked with specific child-scaled activity areas and material. A continuous staff training activity is comprised of films, growth groups, and occasional weekend sessions. This activity might be important as a prototype for other centers, especially new or expanding ones.

(Since this site visit was completed, we have learned that there may have been a sudden change in staff, and that some attention may be given to the outdoor play space.)

ALAMEDA NAVAL AIR STATION CHILD CARE CENTER

BASIC DATA

Client	Alameda Naval Air Station, USN
Address	Building 135 NAS Alameda, California (617)869-2435
Director	Marie Ladd
Architect	None
Date	Unknown
Users	Children of 200 families, mainly from officer ranks, and mainly white; 2 months to 10 years old, majority 5 years and below; 80 regulars for 11 hour day; 150 average, 200 maximum; very few handicapped children served; exact numbers unknown
Size	15,000 sq. ft. plus 17,000 sq. ft. outdoor play area on a 1 acre site
Cost	Not available
People	Marie Ladd, Director
Interviewed	Several staff and children



PROGRAM DESCRIPTION

PARTICIPANTS

The Alameda Naval Air Station Child Care Center serves an average of between 80 and 150 children at a time. It is primarily a drop-in service, though 80 children are regular attendees. Ages range from 2 months to 10 years, with most being below 5 years of age (older after-school children mainly use the Community Center Building and playing field next door). Most children are white (the base is 70% white). Few handicapped children are served. The children are mainly of officer-level families. Children of low- and middle-income families are not using the facility. A sliding price scale is seen as opening possibilities for lower-income families.

The staff is mainly qualified Department of Defense Child Care Attendants, most with certificates.

There is reported to be very high child abuse and child neglect on the station, attributed to very low wages, fathers being at sea for long periods, parental discord during brief times of reunion, and many mothers needing to work off-base at distances making for an 11-hour day away from their children.

PROGRAM PHILOSOPHY

"The primary mission of the day care center is to meet the need of military children for experiences which will foster their development as human beings," reads one of the Center pamphlets.

Staff/child ratios are set at 1:4 for infants; 1:8 for toddlers 18 months to 3 years; and 1:10 for 3 years and up.

The curriculum is "teacher and child mutually controlled." Specific developmental goals are printed for each age group, along with percent of waking hours in which the infant or child is to be engaged in activities relevant to those

goals (e.g., small and large motor activities, 50% of infants awake hours; one hour a day of planned art activities for 3 to 7 year old, etc.).

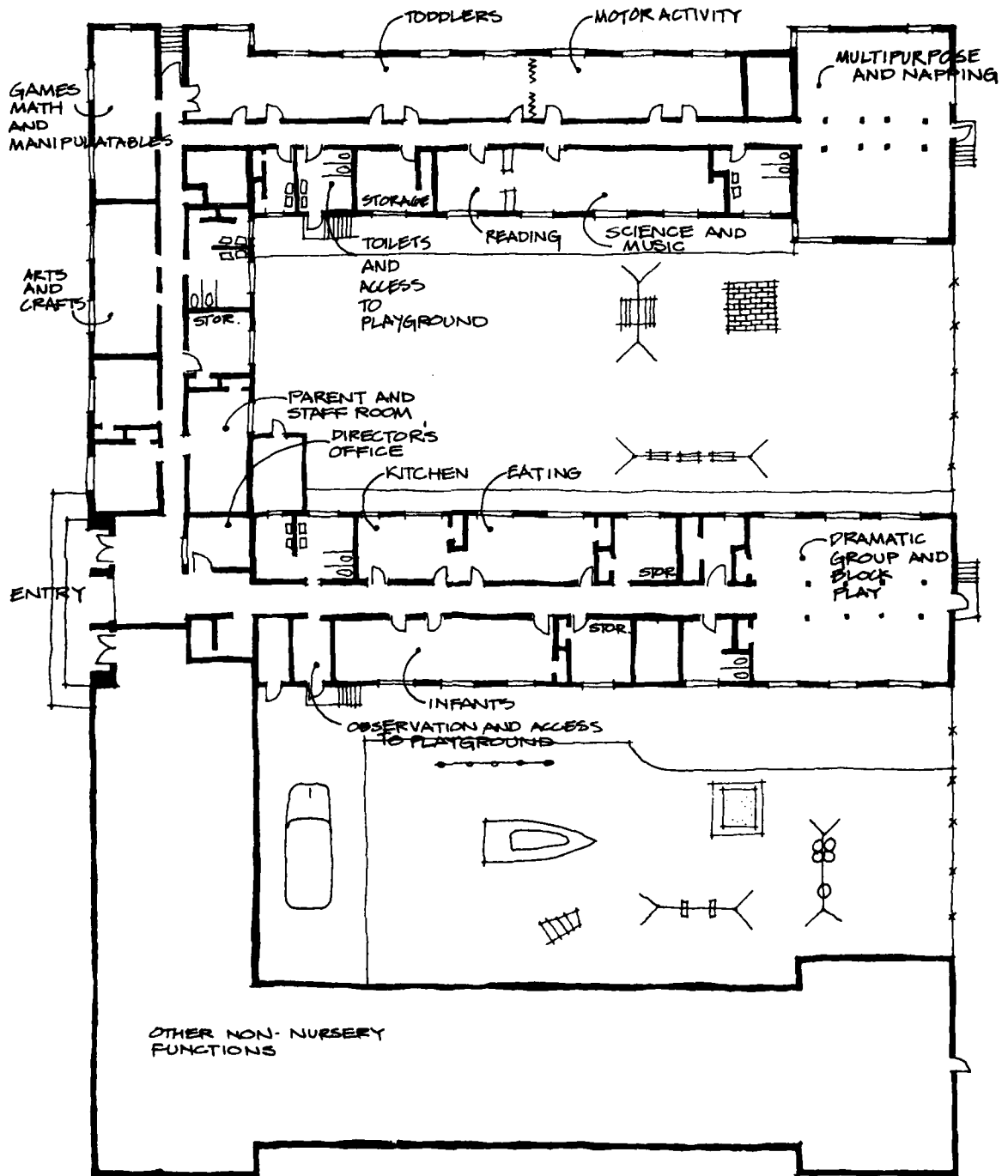
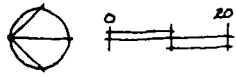
The program is organized around what they call flexible "learning centers". At the beginning of the day (for the 80 regulars), each staff member announces what she or he will focus on. Children follow staff. They are free to move between groups. The staff member and followers move from space to space, activity to activity as the group votes to move. Team teaching is encouraged. Socialization is stressed throughout, but no particular approach or philosophy is followed slavishly.

The Center also plans to offer training programs for local high schools and colleges, and to provide advisory services for other regional agencies, and to start an in-home infant day care program, a regular house drop-in program, and parent training groups. The Center is self-sufficient financially (fees meeting expenses).

FACILITY DESCRIPTION

SITE

The Child Care Center is housed in a converted wood-frame former community services building (formerly classrooms, thrift shop, Navy exchange, offices, some limited child care etc.). The Center is in an area adjacent to the Officers' Club and Community Center Building and very near the entrance to "Officer's Country", the Officers' residential area. The site is flat, the building set back from the street on the south side. Parking is on the street only.



CONCEPTUAL ORGANIZATION

The portion of the building now used for child care is comprised of three long double-loaded corridors forming a "U" shape. Activity rooms, offices, etc. are 15 ft. wide by various lengths. The corridor is of uniform 4-1/2 ft. Most linear rooms are subdivided with furniture to mark more intimate and functionally differentiated spaces.

The children are grouped roughly by age and types of activities, e.g., there is a clear infant room, toddler's rooms, and then a variety of preschooler's activity spaces--named by the staff the "Game-Math Room," "Science-Music Room," "Drama Room," etc. There are also a combined Kitchen-Eating Room, a Parent-Staff Room, Director's Office, and auxiliary supply and storage rooms.



Two sparse play yards were adjacent to the building and enclosed by a chain link fence. Access was through a bathroom and a combination coat and observation room. Little interaction with the out-of-doors was evident here or at the main entry.

There were no special features in evidence for handicapped, vandal proofing, or security.

BUILDING SUBSYSTEMS AND FURNISHINGS

The most remarkable physical attributes about the environment were the bright and lively color scheme, the sensitive use of pillars, implied lines, and shelving to subdivide rooms into differentiated activity spaces, the great amount of materials for the children to use, and the general sense of order and stimulation everywhere. For example, the large Drama Room was subdivided into five functional areas, two different play house areas, building block area, drama/puppet set, and "Mr. Roger's Neighborhood Grocery." Natural light was filtered through translucent paper on the windows. (There were no views to the out of doors, however.)

The pillars and trim were painted in rich, deep matte colors (deep green, mauve, yellow, red, etc.), and children's work was seen everywhere as general decor (e.g., the walls of the corridors were lined with white construction paper along which the children had painted a lively mural).

Everything was carefully stored with children's access possible.

Fire prevention of this wood frame building was accomplished in part through exposed sprayed asbestos.

OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE

Careful observations of children's use of this facility were made for 1-1/2 hours during the site visit.

All children enter and leave with an adult at the reception area, where the child is checked in, cards are filled-out, fees paid, etc. The Director's office looks into this space through a window and open door. Early morning children then go to the Large Muscle Activity Room, from where they follow a staff member to particular activity rooms.

As mentioned above, each activity room was subdivided informally by shelving, implied lines, area rugs, and in some cases locations of pillars. Children used these activity spaces in different ways, and normally in small groups of 3 to 5. The 15' x 30' Game-Math Room, for example, had three functional areas: 4-5 children working with small manipulative objects at one end, 1-2 children at the sand table in the middle, and 3-4 children with "Creative Playthings" toys on an area rug at the other end.

Three functional areas were also seen in the 15' x 45' Science-Music-Reading Room: a sharp differentiation between Reading and Music versus Science by 4-1/2 foot solid backed bookshelves, and a subtle distinction between a books-science table area and an animal area by means of plants hanging on a rod and implied lines from the doorway. Children lie down listening to stories and music in the Music area, and were seen to be tending to the animals or experimenting with science equipment in very small groups in the other areas.

Observations in other activity rooms confirmed the small group nature of most activities, the congruence between small group size and functional subspaces, and the apparent lack of conflict between different activities in adjacent subspaces.

Uses of some of the other areas are worth note:

- All infants activities were in one room. Conflicts were observed between sleeping and active infants.
- Groups of 6-8 children at a time came with a staff member to the kitchen. This seemed to facilitate many people



being able to use a small kitchen and small group identity and interaction.

- Lots of interaction between parents, children, and Director was observed in the entry/Director's Office area.
- Movement was awkward in the long narrow corridors, and seemed to be non-substance time, but the corridors did seem to help the sense of different moods occurring in different spaces.
- The Parent-Staff Room was valuably used for informal "training" sessions between a mother and one or more staff members. It also double-functioned as a storage-duplicating room, but despite the obvious possible conflicts here, none were observed in our short visit.

COMMENTS FROM INTERVIEWS

The interview with the very energetic and thoughtful Director, Marie Ladd, led to a number of design-relevant comments and suggestions, among them the following:

- Preference for center-based or at least group-home care in order to get the children and parents out of the house for awhile. Change and stimulation as well as opportunities to see how staff work with other children were cited as benefits.
- Opportunities for fairly free movement between activities, for group voting on activity preferences, and for mixed-age groupings (beyond the toddler stage) were cited for their benefits for cognitive and social development.
- The one infant room was seen as needing drastic changes, e.g., separation of napping, motor activity, quiet manipulative activity, and changing areas into different rooms or activity "pits."
- The preschool part of the Center was seen as basically adequate, with the exception of more space for arts and crafts, movies, and parent meetings, better outdoor playyards, larger rooms

generally, and more child-sized wash-room facilities. High positive features included the number and variety of rooms, and the opportunity for internal changes, both through furniture movement and the temporary quality of walls and partitions.

- Ms. Ladd argued in favor of Child Care Centers being located in residential housing areas, not on main streets.
- "Smaller is better," she said, advocating centers of no more than 60 to 80 children.
- Drop-in care should be separated at least functionally from early childhood development programs.
- Play areas should be located directly off each age group's inside areas; thus 3 playyards at a minimum.
- The scale and image of Centers should be child-oriented (e.g., at Alameda the corridor ceilings were "lowered" by gaily hung crepe paper, so that we had sometimes to duck slightly in order to move about).

ASSESSMENT

LESSONS

In addition to the Director's recommendations above:

- outdoor play areas need direct and immediate connection to interior spaces
- parent/staff rooms should be provided near entry/exit areas
- a variety of infant and toddler's types of spaces are required (see above observations)
- the Directors' offices work well in close proximity to entry/exit and sign-in areas

- small group activities seem to be facilitated by functionally subdivided spaces for use by 4-6 children
- movement between closely related activities seemed to be facilitated by only partially subdivided space, with intermitant visual connections
- spaces seen to be able to be functionally differentiated for children by subtle cues of shelving, hangings, aligned pillars, area rugs, and implied lines of closure
- access to and stimulation by materials seemed to be facilitated by lots of clearly-marked, orderly, open storage
- asbestos fire retardant should not be exposed

SUMMARY

This was the best Military Child Care Center we saw on the West Coast and seemed the least hampered by the necessity of using an old facility.

Before commenting on the quality of the services provided, it is essential to talk about those who can not afford the services and the quality of home life at this particular Naval Station. This facility is self-supporting and therefore the poorer families can not afford to send their children. Fathers are shipped out for 6 to 9 months putting stress on all families but particularly the poorer ones who do not receive income unless the husband has authorized it before he left. This leads to extensive child abuse and malnourishment in children of lower ranking people who can not use the child care facilities because of economics.

The center itself is very nice and for a large facility still maintains the flexibility of allowing children to choose activities. This is done on a group basis and therefore is not quite as nice as smaller facilities which allow choice on an individual basis but it is a good method and seems to work. By far the strongest aspects of this facility is

its development of clear activity centers with great numbers of things to do and reasonably small scale. Children's art and lively colors decorate all the walls which energizes the environment and makes it truly exciting.

BOLLING AIR FORCE BASE CHILD CARE CENTER

BASIC DATA

Client	United States Air Force
Address	Bolling Air Force Base Washington, D.C. 20332 (212)563-5309
Director	Diane Tucker
Architect	U.S. Army Corps of Engineers
Date	1940s
Users	Dependents of military personnel, age 6 mo.- 10 yrs.; about 120 children at peak use
Size	2,900 sq. ft.
Cost	Not available
People Interviewed	A. Beal, Assistant Director 2 attendants, and several children



PROGRAM DESCRIPTION

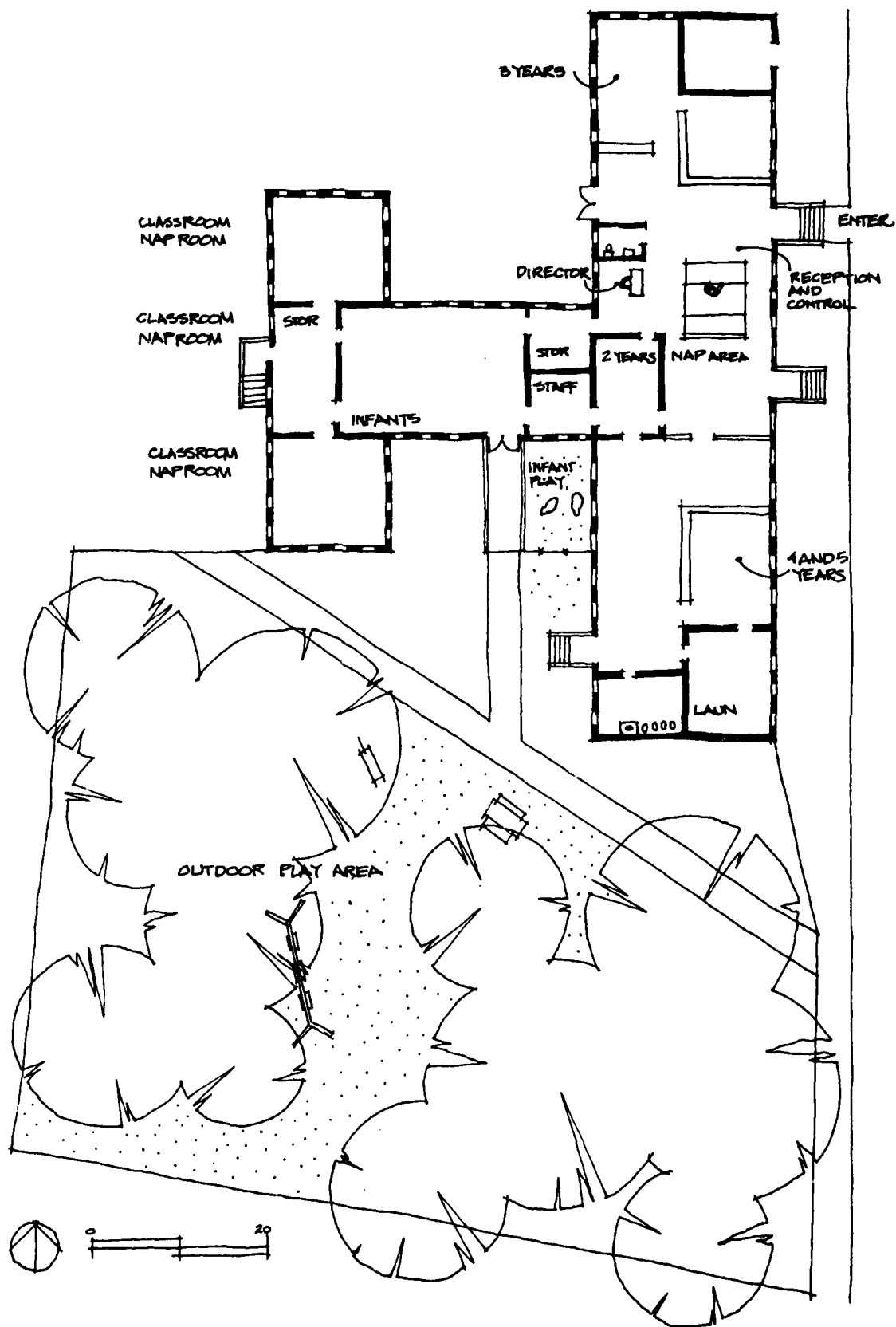
The existing Bolling Air Force Base Child Care Center provides drop-in as well as full-day child care. The daily program emphasizes creative expression, directed play, and reading readiness for children 2-1/2 to 5 years of age. Although the more formal aspects are conducted from 8 a.m. to 11 a.m., learning areas provide developmental activities for children throughout the day.

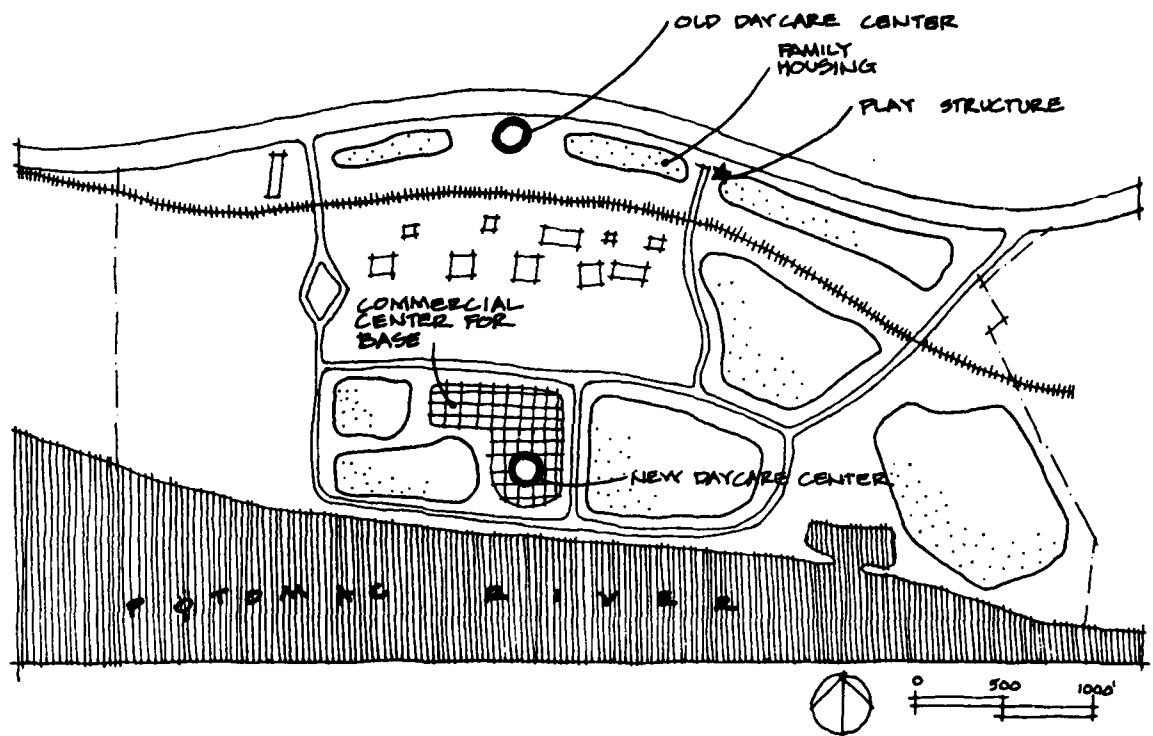
The facility does not provide hot food. Children bring lunches with them. Light snacks are provided. Outdoor play is part of the daily routine, weather permitting.

PARTICIPANTS

The children are grouped according to age. Infants (6 months to 2 years) are in the crib room. Other groups are the 2 year group, the 3 year group, and the 4 and 5 year group. About 50% of the children are minorities, mostly black. Only two or three children have any kind of recognizable handicap, but no special program is available for them. There are a total of 25 employees who operate the Center in two shifts. The Center is open from 6:45 a.m. to 10:30 p.m.; 1:00 a.m. on Saturday.







FACILITY DESCRIPTION

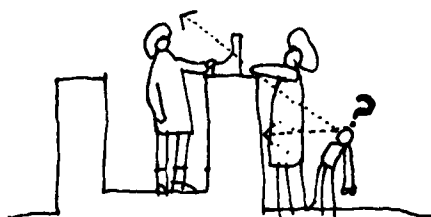
The building is situated on a sloping, wooded site which contains large old trees. There is a side street with parking in front of the entrance. A conventional outdoor play area is located directly south of the building in the wooded area.

The building is a one-story, wood frame former Army barrack. The main "room" is open plan, subdivided with low, 36 inch partitions which form eight different areas. In addition, several conventional rooms create a T-shaped extension to the main room.

ASSESSMENT

The building is clearly outdated and its organization has an effect on the quality of the daily activities. Some key shortcomings include:

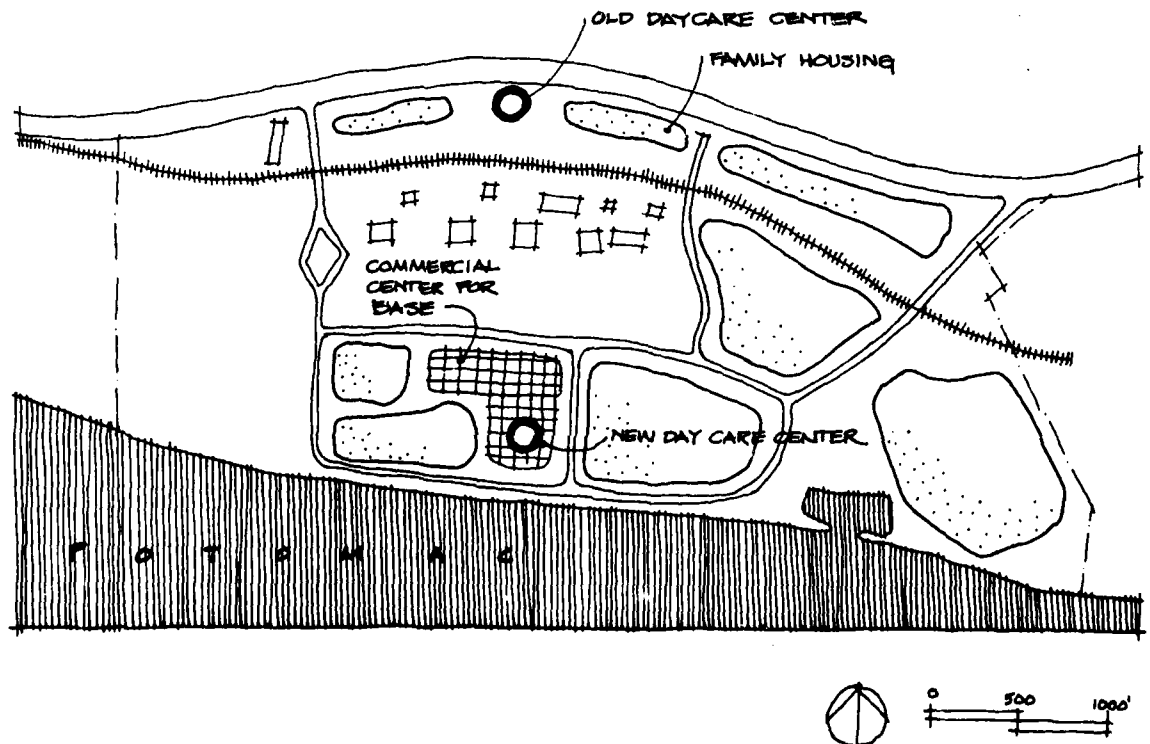
- Access to most primary spaces requires circulation through other activity areas.
- The open plan generates a high level of noise which is not controlled by any buffers. Although the users get used to this condition--including the constant noise from the near-by landing pattern of National Airport--our assumption is that the noise is taking its toll.
- The Director's "station" does not provide a place for work, reflection, and intimate conversation. Although visual control over entering children and parents is an important requirement, this particular arrangement and location provides no privacy for the Director. Its relation to the "entry and welcome zone" is remote.
- The reception station is clearly not at a child's scale. The tall forbidding counter is the first view for the entering child.
- Similarly, the ever-present cash register in this and other military child-care facilities is not contributing to the image of a school or home, which are the typical images Directors would like to project for users and visitors.



BOLLING AIR FORCE BASE NEW CHILD CARE CENTER

BASIC DATA

Client	United States Air Force
Address	Building 417 Bolling Air Force Base Washington, D.C. 20332 (212)565-5309
Director	Diane Tucker
Architect	Vosbeck Vosbeck Hendrik Redinger/Alexandria, Virginia
Date	To be opened in late 1978 (90% complete)
Users	Infants through after-school 12 year olds
Size	16,500 sq. ft.
Cost	\$649,684 (facility and playground); \$33/sq. ft. for the building
People	
Interviewed	Diane Tucker, Director



PROGRAM DESCRIPTION

The new child care facility at Bolling Air Force Base is one of the first Air Force facilities to be built based on a series of definitive plans. While a Director for the new facility has been designated, the facility hasn't opened. Some of the program issues that influenced the design of the new facility include:

- separating children into age-groups
- teacher-oriented program (parents leave children at the door)
- integrated use between indoor and outdoor activity areas
- mixing of drop-off and full-day children

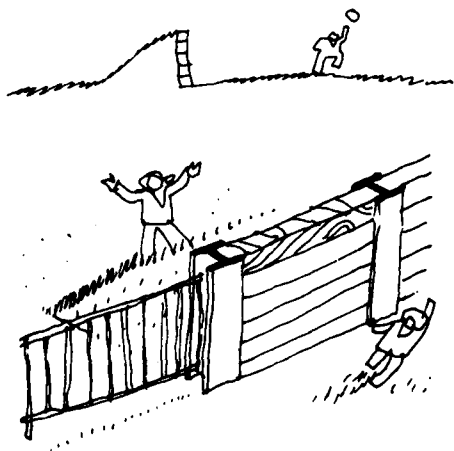
FACILITY DESCRIPTION

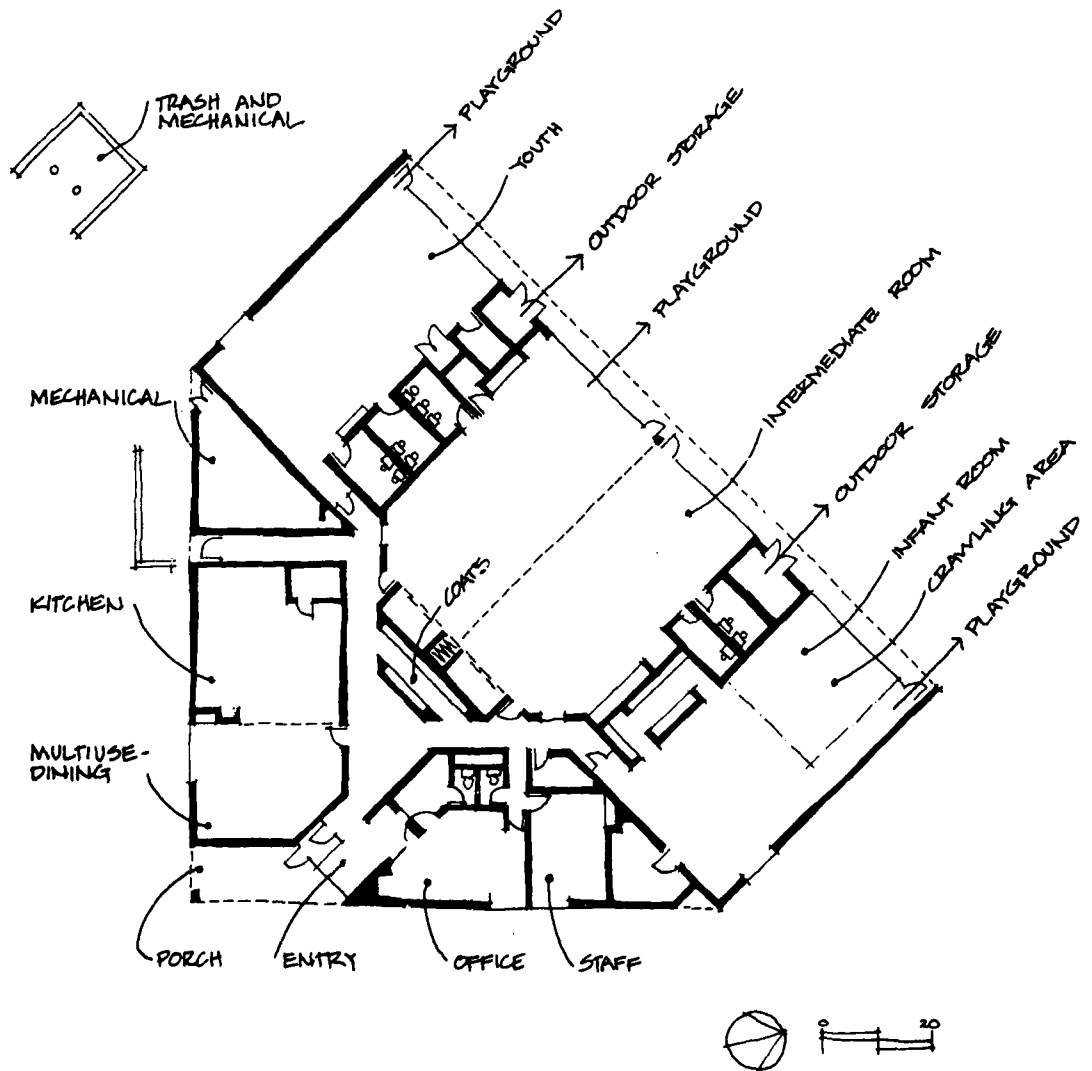
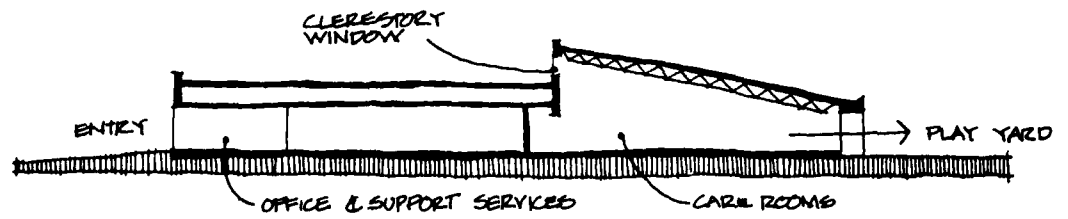
SITE

The site is in the community activities area which is centrally located on the base and is near activities that might benefit from drop-off care service. These include a future P.X., the arts and crafts building, and a bank. The building will help enclose a planned plaza. The site is central to new base housing and is within 1/4 mile of the base hospital.

The site is flat and treeless with about 3/4 an acre designated for fenced outdoor activities. It is directly under one of the final approach patterns for Washington National Airport. There are automobile, fire truck, pedestrian, and bike access paths.

The play yard is enclosed by a berm instead of a chain-link fence. The berm is on the outside of a retaining wall made of large I-beams and railroad ties. The goal of this arrangement is to reduce the feeling of being in a caged play yard.

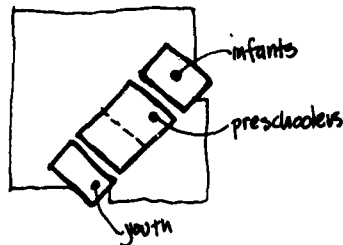






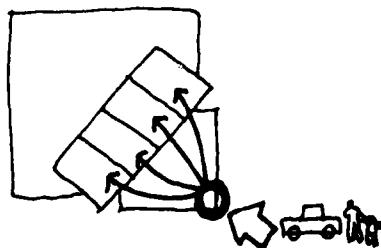
CONCEPTUAL ORGANIZATION

Clear Access to Outdoor Areas

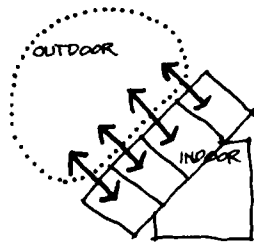


The dominant pattern for the building is that all the major spaces have clear and direct access to a well-furnished outdoor activity area. This relationship supports the program's concept, typical of child care programs, that outdoor activities are programatically equal to indoor activities.

Centralized Control and Screening



The second organizing principle is centralized control and screening as to who is denied access into the building, e.g., a child with a cold or an unauthorized adult.



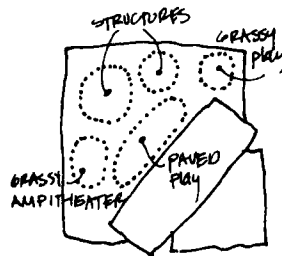
Separation of Age-Groups

The third dominant organizing principle is the separation of age-groups. Infants, preschoolers, and youths all have their own designated rooms:

- infants 6 months - 2 years
- preschoolers 2 - 6 years
- youths 6 - 12 years

Zoned Playground

The playground separates children into different areas by type of activity. The children are not fenced into age group areas.



Balanced Light

The main spaces receive light from two window sources: large windows with a view into the playyard; and clerestory windows which bring diffused light into the room.

Director's Office Location

The Director's office is given a key position in the facility. It is connected on one side to the entrance and on the other to the health (isolation) room, staff spaces, and children's spaces.

INDIVIDUAL SPACES

Kitchen

The kitchen is large and especially well-equipped with commercial kitchen equipment, thus preparing it for 2 varieties of food programs not available in smaller remodeled facilities. The kitchen is larger than the dining/multi-purpose room which it serves.

Coat Room

A centralized coat room for all age-groups is provided.



Room Size

The new Director expressed concern in a letter to the visiting team about the size of the largest rooms. She predicts behavior problems due to the dynamics of children in large groups. Her concerns are consistent with the observations of several systematic studies on child care centers (see Prescott and David, 1976; Ruopp, 1978.)

Entrance Sequence

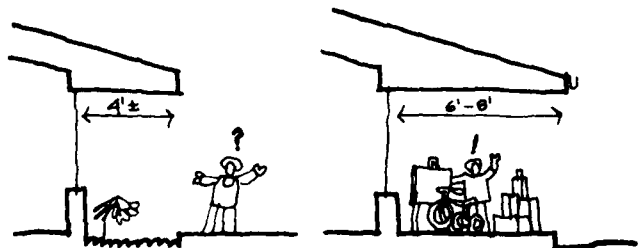
Once inside the building, the children still can't see anything particularly attractive (activities, children, friends, equipment) that might draw them into the facility. The only visible thing is a wall (blocking their view of the coat area) that is decorated with some colorful graphics that direct them (if they can read) to their age-groups. Not until they are actually at the door of their space are there any attracting elements. Once inside the space, the next sequential link between inside and outside is excellent.

Laundry

The laundry had no apparent way of handling the heat and moisture given off by the washer and dryer. The staff can expect the room to be unbearably hot and thus it won't work as a folding room for laundry coming out of the dryer.

Overhang

If the overhang along the northwest side of the building had been about 7 feet wide instead of just under 4 feet, and had been a continuous deck instead of pebbled landscaping, the facility would have gained an important usable space at very little cost.



Entrance Waiting Area

A small lobby for child drop-off is located next to a covered entrance porch.

Observation Windows

Observation windows (not one way) are provided for views into the junior room (2-6 years) but not into the infant or youth rooms.

Infant Room Activities

Areas for various activities are provided in the infant room, including a crawl space, general crib space, and a diapering alcove combined with a kitchen space furnished with residential-quality equipment.

ASSESSMENT

Entrance Porch and Approach Sequence

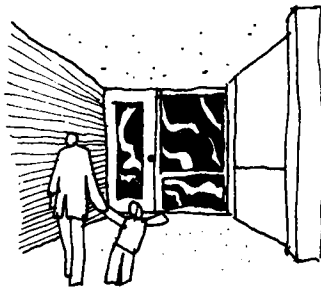
The covered entrance is a very successful feature of this center. It is large enough to provide needed outdoor waiting space and protected enough to provide transition space for people using the building. This is especially important because the drop-off lobby is small.

The dark glass around the entry is inappropriate because it is ominous and mirror-like and not in keeping with the general goal of making the entry space a cheery, anxiety-reducing place. In fact, the whole building is foreboding upon approach and entry, more like a set for Bergman's "Wild Strawberries" than like a place for children.

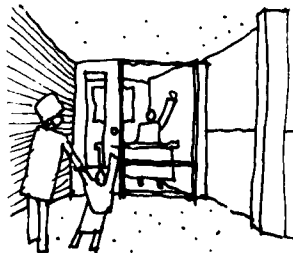
Window Treatment

A window guard made of a heavy metal frame and chain-link fence is located in one floor-to-ceiling window apparently to prevent accidental collisions of high momentum. The guard is very obtrusive and could be replaced with other safety measures, if needed at all.

TINTED
GLASS
WORKS LIKE
A MIRROR

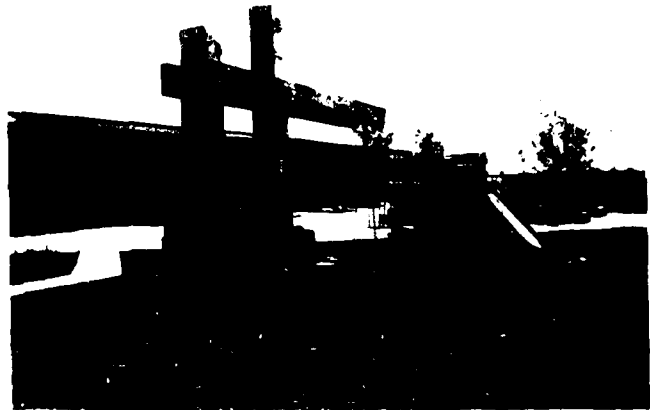


CLEAR GLASS
WOULD MAKE
ACTIVITIES
VISIBLE AND
LESS FOREBODING



Clerestory

The clerestory windows (a strip of windows located high in a wall) will work well on cloudy days and in the winter. Unfortunately, they are on the southeast and will bring more direct sunlight into the room than will probably be desired or needed. Similar south-facing clerestory windows at other facilities tend to get covered with shades that as a matter of convenience don't get re-opened. Still, the clerestory windows, for those who value them, are an important light source for a room that would otherwise have glare problems from other windows. The value of having smoked-glass in windows to balance the light in the room is dubious.



REFERENCES

Prescott, E. and David, T. G. Concept paper on the affects of the physical environment on day care. Pacific Oaks College, Pasadena, 1976.

Ruopp, R. R. National Day Care Study: Preliminary Findings and Their Implications. Washington, D.C.: Department of Health, Education and Welfare, Office of Human Development Services, 1978.

BIG SISTER LEAGUE COLLEAGUES INFANT CARE CENTER

BASIC DATA

Client	Big Sister League for Human Development
Address	711 S. New Hampshire Avenue Los Angeles, California 90005 (213) 385-5104
Director	Marilou Conner
Architect	Sanford Hirshen & Partners, Architects/ Berkeley; Jack Trumbo, Chief Designer
Date	1977
Users	42 infants, 6 wks. to 2-3/4 yrs., approximately 70% minority, plus professional and 16 paraprofessional staff; 1:3 ratio
Size	9,500 sq. ft. plus 10,000 sq. ft. underground parking and 8,600 sq. ft. outside developed space on a 1/3 acre site
Cost	\$750,000 including parking and all site development; \$40/sq. ft. building; \$30/sq. ft. including outdoor developed space
People Interviewed	Marilou Conner, Director Evelyn Anderson, Program Director Jerry Ferguson, Chairperson, Board of Directors Sanford Hirshen, Architect



PROGRAM DESCRIPTION

The Big Sister League began as a residential center for pregnant, unwed girls. Since 1970 it has administered three programs:

- a residential program for single, low-income women, some of whom are pregnant
- a family day care program
- the infant care program

The former are housed in a Spanish Colonial two-story building next door to the Infant Care Center.

The Colleague Infant Care Center is a center of human development for infants of low-income single parents, most of whom are going back to work or are looking for work.

The building was entirely paid for by private donations. To maintain the program, applications are being made for state grants.

PARTICIPANTS

The infants range in age from 6 weeks to 2 years, 9 months. Capacity is 42 infants. Typically about 60% are minority (Black, Asian, Hispanic). There are no children with significant physical handicaps, but many of the children are suffering emotionally and in some cases have developmental disabilities due to parental neglect, loneliness and child abuse.

The parents are young, single, living under emotional and financial stress, and are often AFDC recipients, minority, non-English-speaking, and working at low or moderately-paid jobs, if at all. Unfortunately this is also a typical profile for abusive parents.

The staff is comprised of a professionally trained director, program director, a nurse, a cook, with 15 paraprofessional CETA employees serving as primary caregivers. Staff-child ratio is thus 1:3.

The Director mentioned a need for more professional staff, a minimum of one early education person with 12 months extra training in infant development per duplex. A highly dedicated and qualified Board of Directors oversees the Center, led by an environmental psychologist/architect Chairperson.

Infants are grouped into six houses of 6-7 children each, paired with another house to make three 12-14 child duplexes. There are 2 para-professionals per house.

PROGRAM PHILOSOPHY

Infant stimulation, guided development, loving care (especially for lonely or abused children), nutrition, health services, caregiver training, the dual concept of shared parenting and parent education, and socialization to middle-class values, an overriding goal for both the staff and the children, are the main program objectives of the Colleague Infant Care Center.

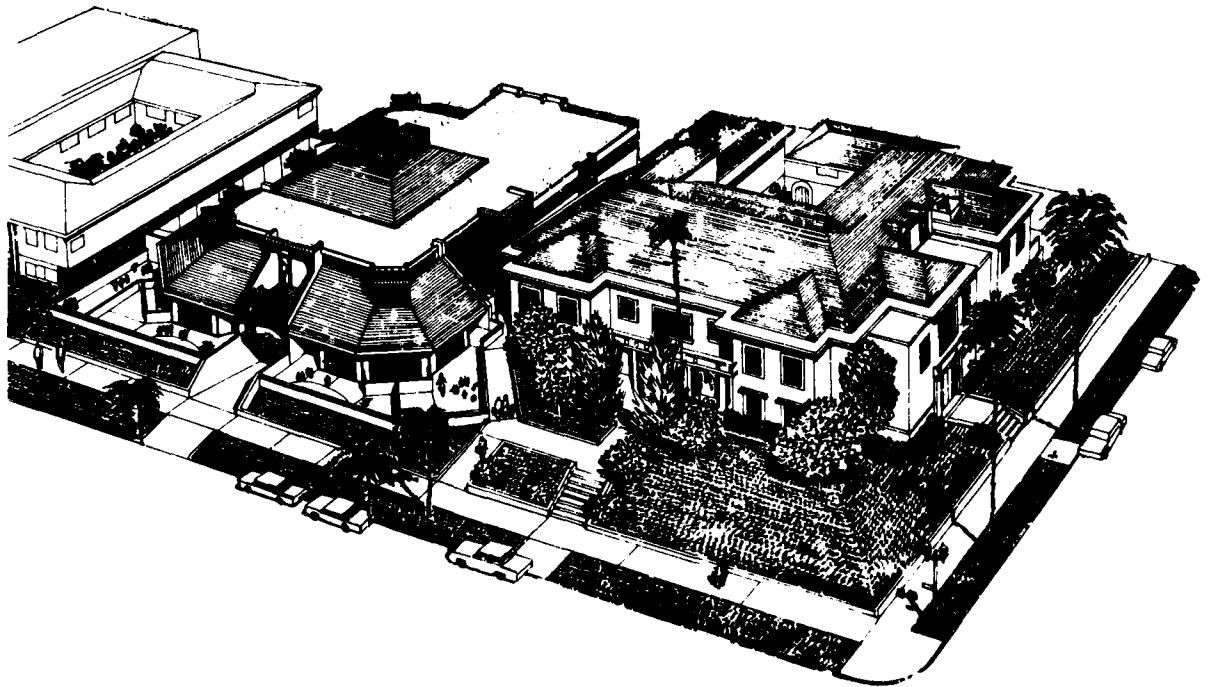
Mothers bring their babies to the Center and to their "house" and are encouraged to stay awhile to talk with the caregiver, share parenting strategies, etc.

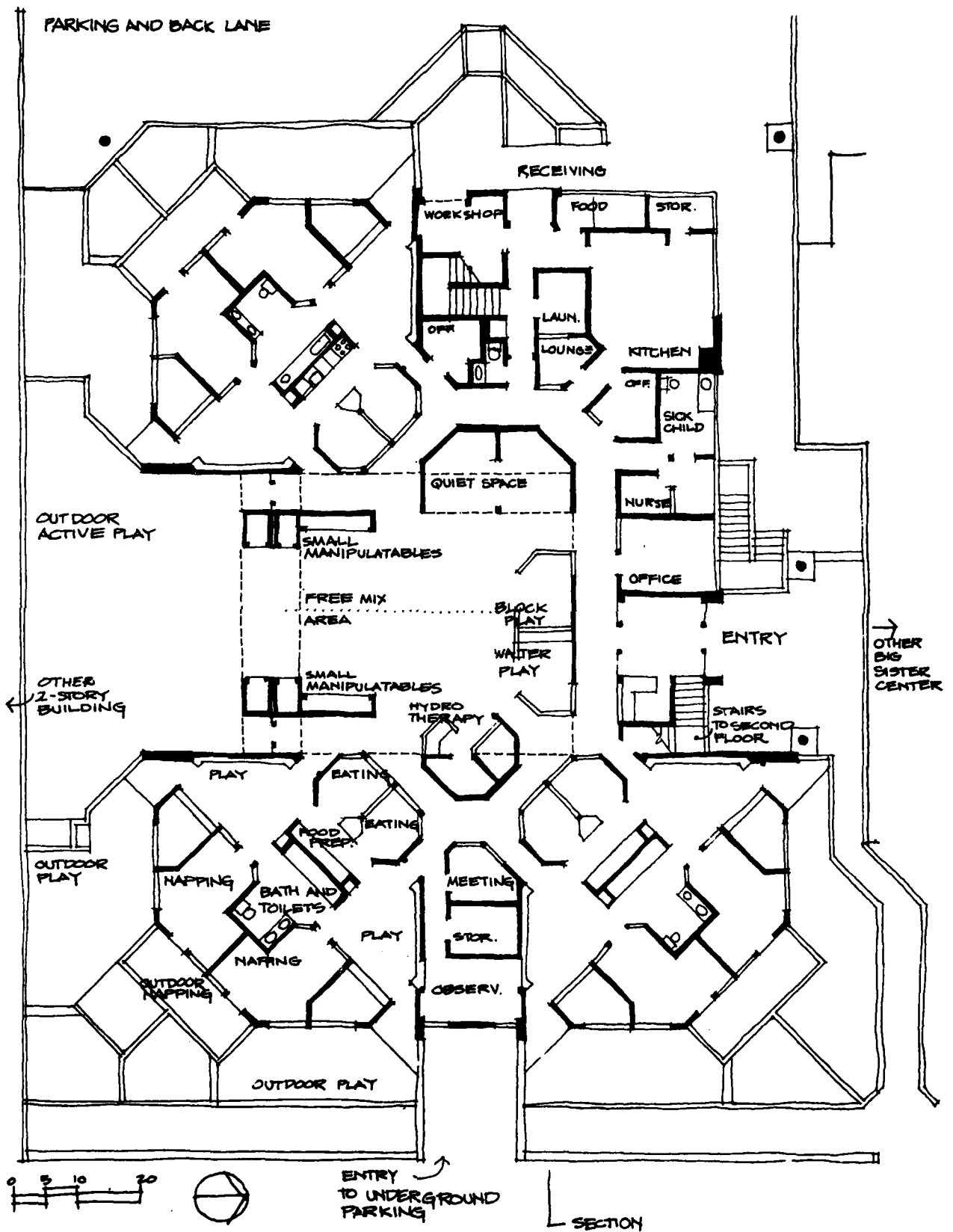
The Center is committed to working on the prevention of child abuse by breaking the incidious cycle of abuse and neglect through parent education, role modeling, and the development of parenting skills. This occurs in a three-step sequence:

- development of trust and security between the primary caregiver and the infant
- development of the parent's trust in the professional staff
- parent education

This sequence is based on their conviction that the first year of the infant's life is the most important time for parental change of attitudes.

They also are very aware that current research on quality infant care indicates that "quality" translates into "actual caregiver-infant contact" and "ongoing caregiver training", which in turn translate into "cost," which therefore has to be high when working with infants. National research indicates a 1:3 ratio of actual contact with infants is necessary, that at least one of three caregivers needs professional training (12 months beyond an early childhood education degree), and that on-going training is necessary through seminars, films, discussions, visits, development of communication skills, knowledge of infant development, knowledge of the use of curriculum materials, and development of parenting skills.





FACILITY DESCRIPTION

CONTEXT AND SITE

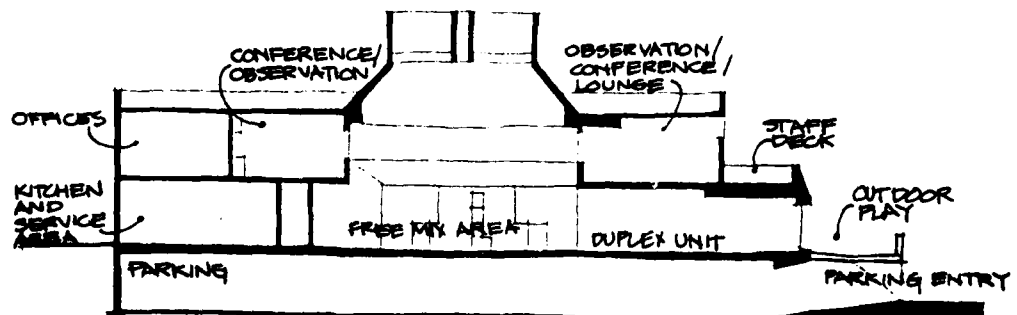
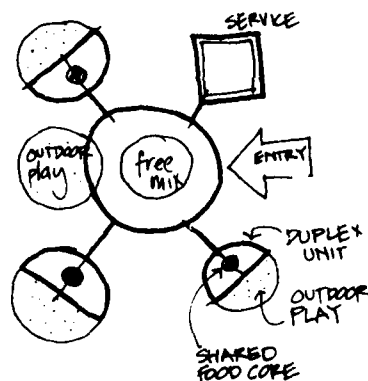
The Center is located one block off Wilshire on the fringe of the center of Los Angeles near a large minority and single-parent population. It is sited tightly between the other Big Sister League building and a two-story apartment unit on an otherwise high-density residential street.

Parking is underneath the facility. Service is off a back alley. The entry for parents and infants is along a difficult-to-find path between the two Big Sister buildings. The building is separated from the street by a berm and concrete-walled play areas.

CONCEPTUAL ORGANIZATION

The Center is organized into four pods around a three-story 27 ft. community atrium with an additional 7 ft. skylight on top. Three of the pods are side-by-side "duplexes" of two-children's "houses"; the fourth is a service, staff, and storage area. The atrium serves as an indoor free-mix play area directly linked to a modest outdoor play area.

The houses in a duplex share a core food-preparation area, bathing and changing area, and outdoor napping area. Otherwise the houses are mirror images of each other. The two eating areas are visually and aurally connected by glass. The other play and sleeping areas are visually separated from each other by the shared core of facilities.



There is a controlled circulation ring between the duplexes and the free-mix area which also provides casual touring and observation space. Conference rooms, lounges, and special project offices are on a second floor, all looking down into the free-mix atrium through large windows.

INDIVIDUAL SPACES

Special resource areas are provided on the edges of the free-mix area--music, AV equipment, water play, block play, hydrotherapy area, small manipulables, large-motor activity equipment, and a quiet area behind sliding glass doors.



Each house has a central play area (which doubles as the main circulation in and through the house) surrounded by a smaller play area, napping room, eating nook, shared facilities core and exit to the private outdoor play space.

House ceiling heights are 8 ft. in the quiet areas and 9 ft. in the actual play spaces.

All furniture has been specially designed and most of it is built-in.



BUILDING SUBSYSTEMS

Acoustics

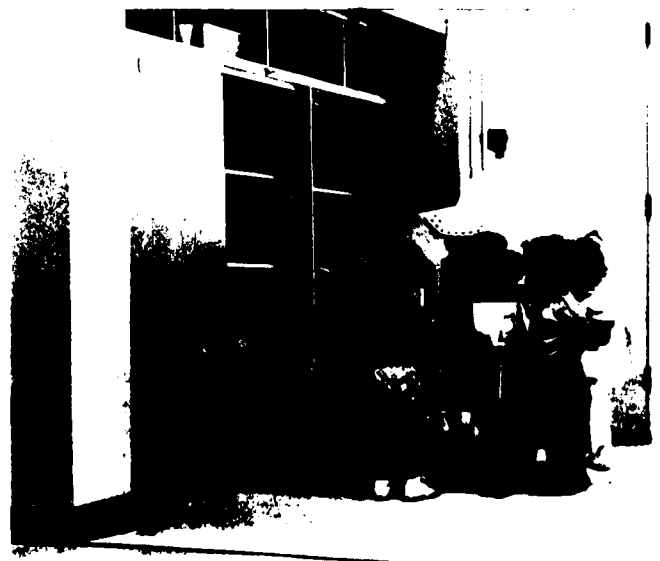
All walls and ceilings are hard. There are only scattered rugs, no drapes, no soft chairs, etc. Planned acoustic panels were a late budget cut. The central free-mix play space, being 35 ft. square by 27 ft. tall, and all hard surfaces, is an acoustic disaster.

Natural Light and Views

Natural light enters all spaces, but in most cases from above child height. The only views out are into the drab concrete-walled play areas.

Flexibility

Most things are built in, and there is no provision for subdividing spaces. There were complaints that this limited staff initiative and made it impossible for the free-mix area to be used by two or more groups.



Storage Systems

Storage was built-in, much of it above head height; very little open storage was accessible to infants in the houses.

Exterior Play Spaces

Private play spaces are connected to each house, but are mostly concrete-walled crib-like spaces. The staff complained about there being too much concrete and that the other material--sand--is not good for infants. No shade was provided because of budget cuts. A larger common play space with young trees and some natural materials is off the indoor free-mix area.



OBSERVATIONS AND INTERVIEWS

OBSERVATIONS OF USE

A fairly systematic 1 hour observation of the free-mix area and one typical duplex unit revealed the following about spatial behavior:

Free-Mix Area

- Despite the presence of some toys for cooperative play in the free-mix area most motor play was solitary or parallel.

None of the architecturally-scaled equipment demands any cooperative behavior--indoors or out.

- The two climbing structures are clearly the places of the greatest amount of active play.
- The partially-enclosed block-play area provides protection for toddlers' structures from adjacent motor activities, but at 80 sq. ft. is too small.
- Children in very small groups of 2-3 play quietly with a staff member at the small manipulative puzzle tables, but seem to be distracted frequently by the immediately adjacent large-muscle activities.



Duplexes

- The napping rooms are quiet and can be darkened, yet have possibilities of natural light, and are well-separated from major activities.
- Children seem to move quite freely between the two houses.
- There is a serious lack of child-moveable objects and display space throughout the Center.



- The bathing basins are functionally very adequate, but are too small and too high to allow any chance for the infant to play or to do anything other than be passively and quickly bathed.
- It was obvious that the windows between the lunch areas and the community space were intended to simulate houses, opening onto a central active court, or neighborhood space, but unfortunately views to the real outdoors are totally lacking.
- Circulation and activity in the central part of each house are in conflict.

COMMENTS FROM INTERVIEWS

Client-Architect Communication

The client felt very strongly that the success of a building project like an infant care center depends very much on the style and depth of communication between the architect and the client. A generic design guide is very valuable, but the interpretation of it and the additional specific information which client representatives and typical users need to communicate will make or break a project. In this case, they felt that the architect didn't adequately deal with suggestions made by the Board of Directors regarding the subtle--and not so subtle--needs of infants. One example cited is the amount of expensive built-in equipment, when staff and children thrive on moveable parts. Another example is the harsh business-like interiors, when the houses were to simulate soft, comfortable homes. They recommended, therefore, at a minimum, that there be frequent communication between program and final design, that the staff, not only the Board, should be brought into programming as early as possible, and that there should be an ongoing two-way interchange of goals, professional values, and design ideas.

Observation Space

For any center planning to begin shared parenting or parent education, observation spaces at ground level are necessary, as well as ones which will allow parents and

staff to follow a child around during the day. A good T.V. and sound recording system are also helpful.

Noise and Scale

An infant center, they thought, should be much smaller in scale than this one. The free-mix space is too large for groups of 6 or 7 infants, which because of occasional conflicts between the children is the maximum number who should use it. The atrium ceiling is much too high, making the children seem insignificant by comparison. Noise is an associated problem with spaces which are too large and have too many hard surfaces for the number of people in them. Softening should be everywhere.

Specific Places for Specific Activities

Despite the several corners in the houses, the staff complained that they lacked a sense of specific places for specific activities.

Details

The staff felt strongly that there was an overkill on details for little children, and that money would be better spent on upgrading staff, on staff training, and on toys and materials, than on carefully detailed built-in furniture requiring a cabinet-maker.

Air Conditioning

The forced-air air-conditioning system is inadequate for the large central space. Though the atrium works somewhat like a chimney, it functions more as a collector of sun and heat. Good exhaust systems are also required in changing and food preparation areas.

Storage

Need extra storage for stockpiling inventory.

AD-A088 371

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CASE STUDIES OF CHILD PLAY AREAS AND CHILD SUPPORT FACILITIES. (U)
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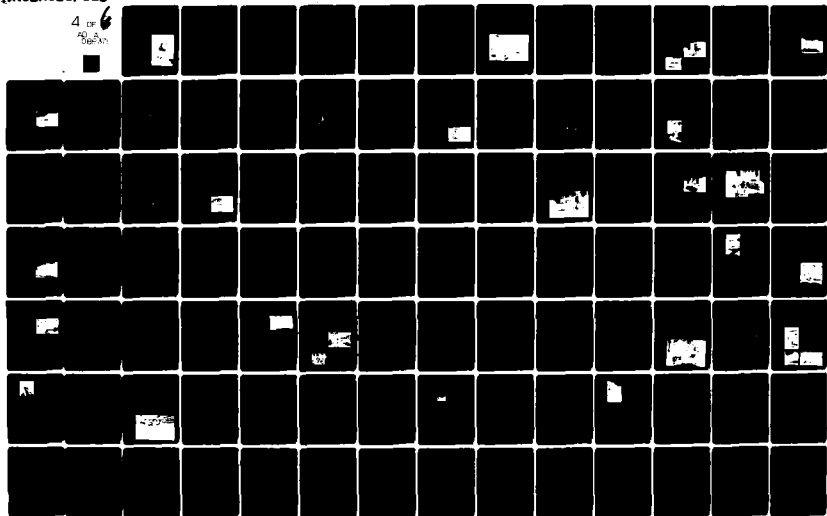
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Safety and Security

Although wall-to-wall carpet limits activities, rugs tend to slip. Gates need to be everywhere. But artificial barriers should be minimized.

Site Conditions

Quick parking and pick-up and drop-off verges are needed for parents. Outdoor play areas should be much larger, should be located adjacent to each house, and should include water, shade, inclines, textures, natural things, clear paths for movement, space for bikes and wagons, and separation between infants' and toddlers' areas.



ASSESSMENT

The Big Sister League Colleague Infant Care Center is a nice facility but is extremely expensive to build and run and is questionable as an architectural demonstration model.

The house concept seems to orient a child to one or two adults and to six or seven children. The joining facilities between houses, however, really seem to make the duplex the unit to which infants and staff identify, not the house. Napping areas are well separated, but play areas are dismal and much too small.

The houses and duplexes do not feel at all like "homes"; organizationally they have the layout of homes, but aesthetically and emotionally they are very harsh and institutional.

The central community space is central, but again because of harsh--though careful--detailing, it does not feel like a vibrant, soft, community space. Acoustics and visual hardness are definitely a problem.

While it is realistic to think of the center as a demonstration center for its program, there are some real design problems affecting infants. Additionally, the expense, size per child, and cost per child are unrealistic on a national scale.

Furthermore, it seems decadent to provide infants a Mercedes when they can't yet recognize a car. Money is better spent on staff, program development, and materials--architecture does make an important difference to programs, staff morale, and children's behavior, but this facility far overdoes it and makes serious mistakes in the process.

The building was described conceptually by the staff and in the architect's master planning report as trying to help the infant identify with one primary caregiver, then to a group of other children in a home-like setting, and finally on increasing scales to other children and adults in a community. Organizationally the building was thus divided into houses, duplexes, and a community common space. Some exterior play areas were related to each house and some

to the community as a whole. The general philosophy of the individual child relating to a primary caregiver and unit of people seems sound. Organizationally (see the plan and plan diagram) the concept comes off well. But the lack of any home-like qualities in detailing, in finishes and colors, in lack of flexibility, in lack of easy access to a multitude of materials, mitigate against the successful architectural realization of this idea. It is an expensive and in some ways a beautiful building, but as an image, it seems more a model of a humane institution than it does as a community of intimate homes.

BING NURSERY SCHOOL

BASIC DATA

Client	Stanford University
Address	Stanford, California 94305
Director	Edith Dowley
Architect	Clark, Stromquist, Potter & Erlich/Palo Alto
Landscape Architect	Royston, Hanamoto, Mays & Beck/San Francisco
Consultants	Research Psychologists/Stanford University School Planning Laboratory/Stanford University
Date	1963
Users	270 pre-schoolers in one of three different sessions 84 average at any one time 14 full-time staff
Size	Ca. 10,700 sq. ft. on a ca. 6 acre site, including 3-1300 sq. ft. activity rooms
Cost	\$370,000 including \$65,000 for site development, landscaping, street improvements, and outdoor play yards, \$10,000 for fixed furnishings, and \$9,500 for movable furnishings. \$28/sq. ft. including furnishings; \$11,000/ acre for site
References	Bing Nursery School: the child's view. <u>School Planning Laboratory Reports</u> , March 1966, <u>1</u> (Whole No. 23).

PROGRAM DESCRIPTION

The school's program is based on discovery learning; the child is treated as an individual, then as a member of a social group.

FACILITY DESCRIPTION

Children enter from the parking and drop-off areas into a central planted atrium, with three playrooms radiating outward from one side and research spaces on the other side. Children enter the center by a different door from staff and researchers, thus insulating the child-private areas from the researcher and student-researcher-public areas.

The activity-playrooms are large, somewhat sparsely furnished, with high ceilings and bright clerestory lighting; they are not interconnected.

Each half-acre playyard is directly off an indoor activity space, is connected with extensive covered transition space, and each offers the child a different environment and set of experiences.

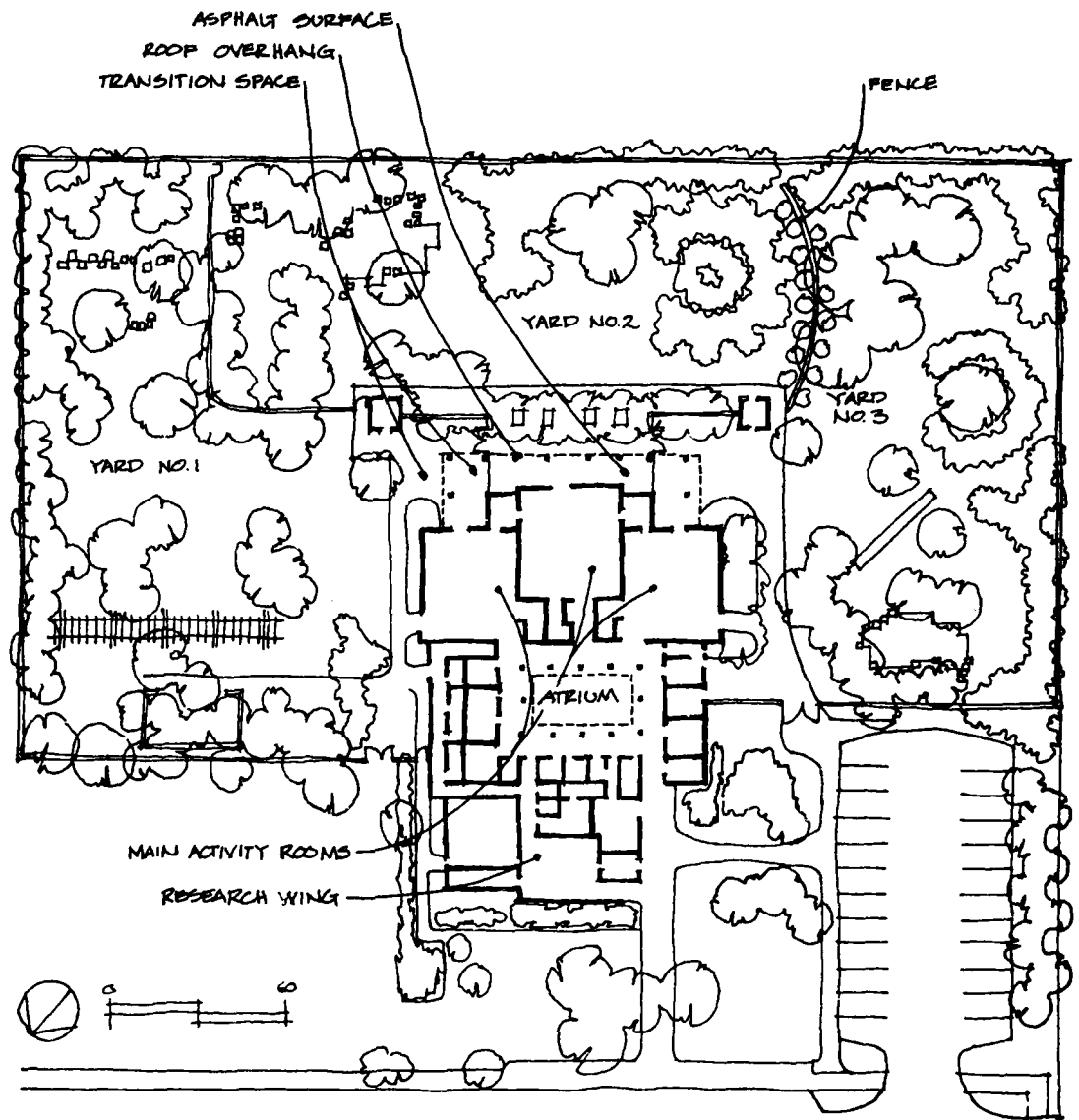
The playyards are sculpted, well-landscaped, and shaded in child-scale, and offer different types of play equipment and spaces.

Interior environmental control is maintained by independent systems: radiant heating in the floor and cooling by natural cross-ventilation in the activity rooms, air conditioning in all research spaces, and a unit heat ventilator system in the reception, library, and conference spaces.

ASSESSMENT

Lessons

- advantages of indoor activity spaces opening directly onto independent though connecting outdoor playyards



- advantages of playyards being well-landscaped, well-shaded, sculpted, well-furnished, and child scaled
- advantages of extensive indoor/outdoor covered transitional space for play in shade and protection from rain
- the most remarkable aspects of the playyards were their distinct styles, their many sub-spaces defined by unobtrusive landscaping allowing active and quiet pursuits, and their being scaled very closely to the child
- different HVAC systems including natural cross-cutting ventilation for different activity types



BLOCK SCHOOL FOR PRESCHOOL EDUCATION

(Currently converted into a bi-lingual
pre-and elementary school)

BASIC DATA

Client New York City Board of Education

Address 1062 Winthrop Street
Brooklyn, New York 11203

Director Carol Harris

Architect Hammel Green & Abrahamson/New York

Date 1972

Users Inner city, pre-school children

Size 6,000 sq. ft.

Cost \$90,000
\$15/sq. ft. renovation

References Learning through design. Progressive
Architecture, 1972, 53, pp.84-88.

Educational Facilities Laboratories.
Found Spaces and Equipment for Children's
Centers. New York: Author, 1972. p.12.

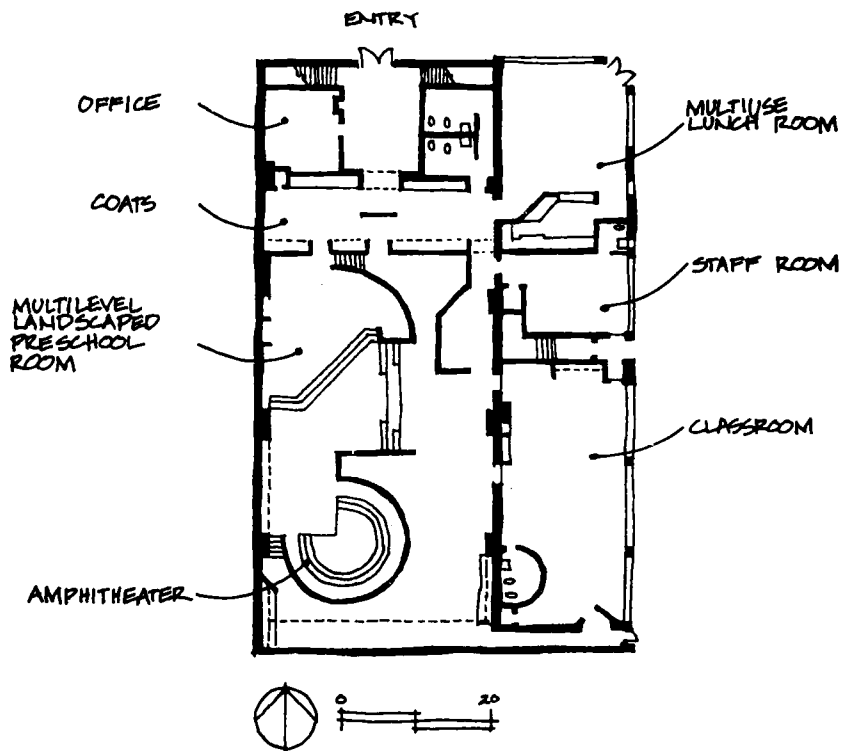
A New Lease on Learning. New York:
N.Y. City University, n.d. (Film).

PROGRAM DESCRIPTION

A vacant synagogue and a store in an inner city, rapidly changing neighborhood were converted into a pre-school, with the assistance of a federal grant.

FACILITY DESCRIPTION

The interior has been remodeled with new construction that fills the room with a landscape of level changes and partial partitions to create spatial variety both vertically (cubbies & escape places) and horizontally (spaces for special projects, classes, etc.).



ASSESSMENT

RENOVATION

This is an example of a low-cost, parents' assisted renovation of a "found space."

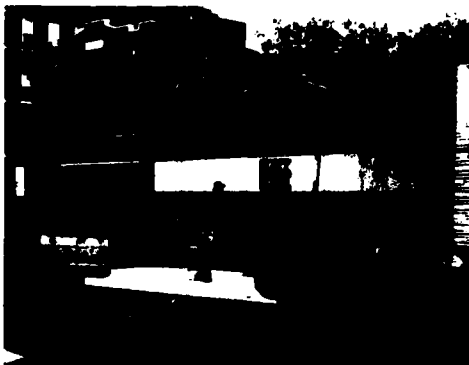
Structural changes were minimal, while most of the spatial change was achieved by carpeted wood platforms, and low plasterboard partitions.

Acoustics

While the large open space is successfully landscaped and divided into areas without creating rooms, more sound absorbing materials would further improve its use. Noise is a current problem because there are more children than originally planned.

Color/Light

The most successful space in the building is the second, smaller classroom. Originally used just as a gym, it is a lot cheerier than the larger classroom because it has both natural light and bright colors. The light is high-side light and fills the whole room with fairly high quality, evenly distributed daylighting.

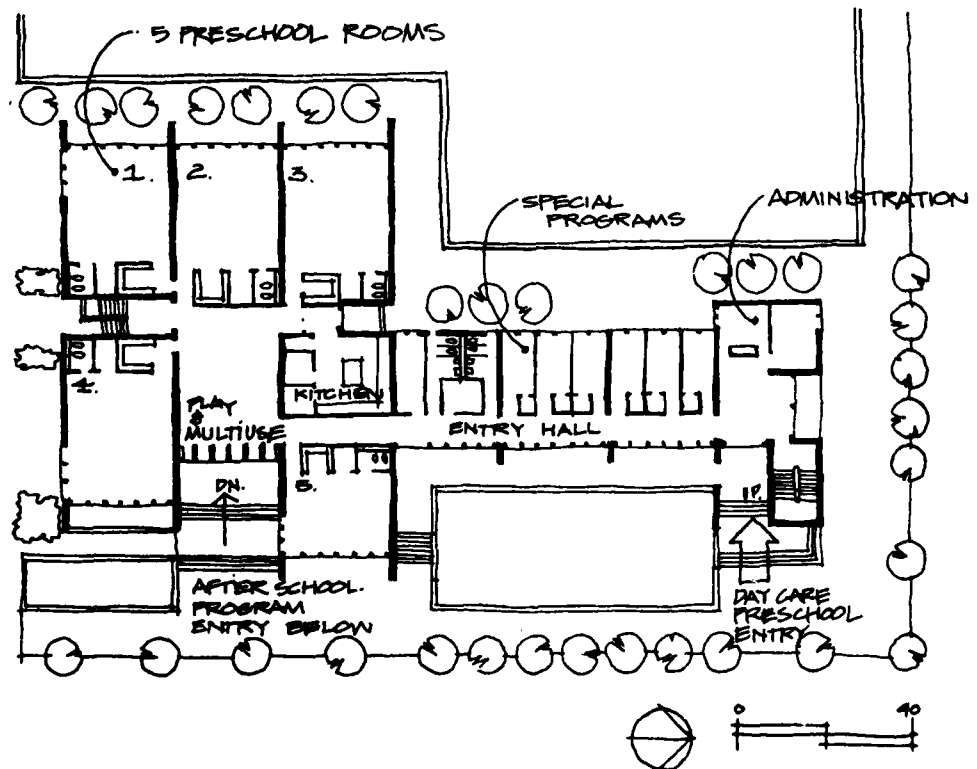


The bright colors on the front of the building as originally pictured have now been repainted much duller colors and the image of the whole facility as a special place in a fringe community has been compromised.

DAUGHTERS OF AFRICAN DESCENT DAY CARE CENTER

BASIC DATA

Client	Daughters of African Descent
Address	Essex Street on Hegeman Street Brooklyn, N.Y.
Architect	Frank Williams/New York
Date	c. 1970
Users	105 pre-school and school children
Size	18,000 sq. ft.
References	Daughters of African Descent Day Care Center, Brooklyn, New York. <u>Architectural Record</u> , April 1972, 151, 131.



FACILITY DESCRIPTION

This is one of a series of day-care and after-school centers for the City of New York. The program separates day-care-preschool services on one level and after-school drop-in services on another. Most of the children walk to the facility.

The day-care-preschool rooms are up a half level clustered around a "multi-purpose" hall room on the large end of an "L" shaped site. Administrative offices and other support spaces are along a south-lighted single-loaded corridor. The roof is enclosed with a fence and provides the play space not available on the tight lot. The lower level contains the after-school program.



ASSESSMENT

Separate Program Entrances and Image

The most significant idea expressed in the design of the facility is the clear separation of entrances and thus of the day-care and after-school programs. One potential benefit is a clear image of the place and of their own program in the minds of the participating children.

Missing Daylight and View

Unfortunately, the services on the lower level are all delivered in windowless rooms. A split-level scheme should have been able to provide daylight for both levels. The spaces for half of the facility are awful in contrast to the ordinary but pleasant spaces upstairs.

The Missing Porch

The Architectural Record article on this building notes a front porch concept that presumably would make an "invitation to the neighborhood." While the building is built as shown in the plan, there is no "front porch," nor is there any sense of space for community use.



Construction Quality

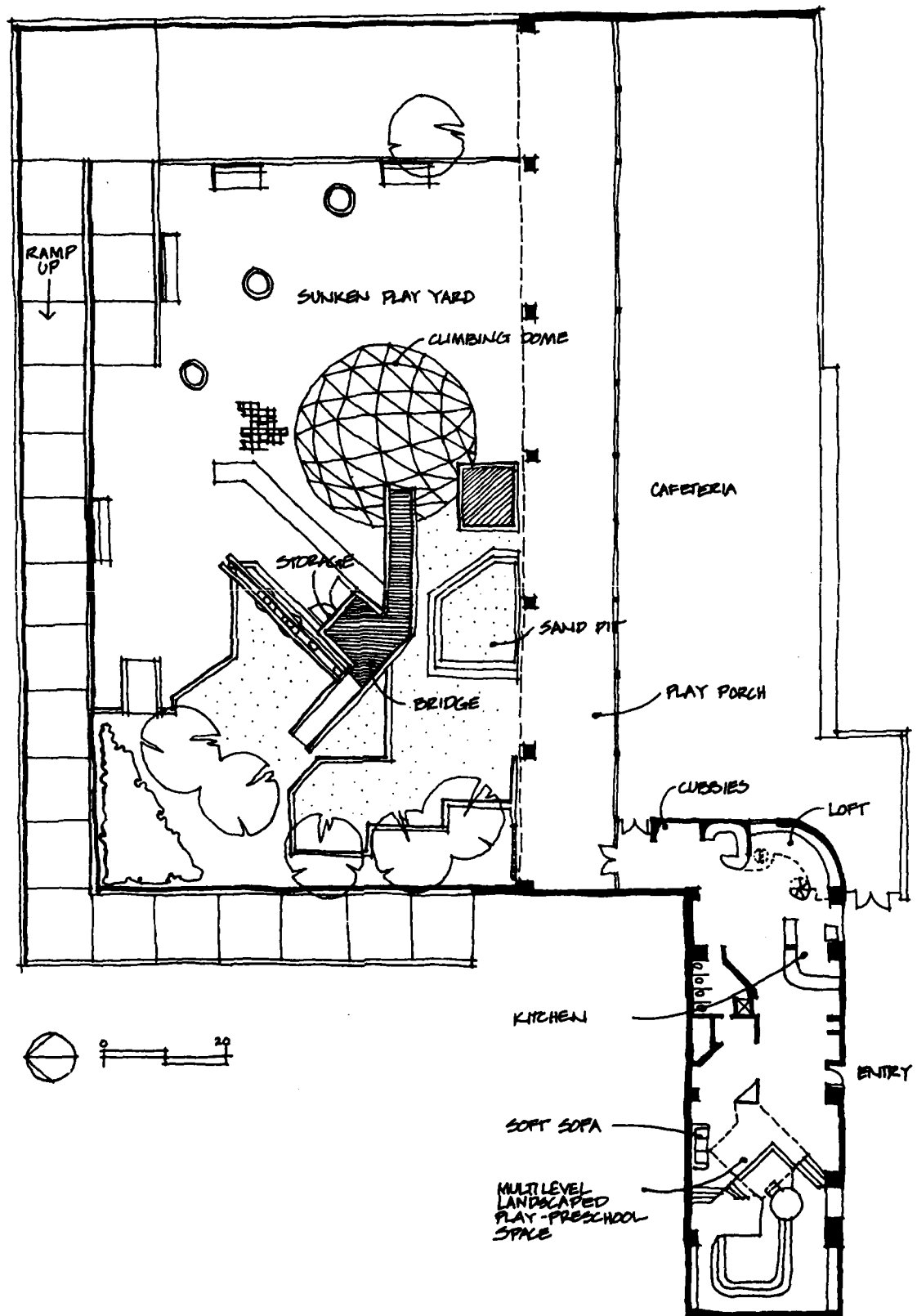
Although the magazine article suggested a good working relationship with the contractor, the building has a continuing problem of water leakage through the concrete-covered metal decking that then allow water and rust to stain the suspended ceiling.

FEDERAL EMPLOYEES CO - OP LEARNING CENTER

(Formerly National Demonstration Center
in Early Childhood Education, U.S. Office
of Education)

BASIC DATA

Client	U.S. Office of Education
Address	Federal Office Building #6 400 E. Maryland Ave., S.W. Washington, D.C. 20202 (202)-245-7785
Director	Evan Nelson
Architect	Hammel Green & Abrahamson/New York
Date	1972
Users	40 children (ages 2-6) of federal employees
Size	2160 sq. ft. (indoors)
Cost	\$125,000 including playground
References	Educational Facilities Laboratories. <u>Found Spaces and Equipment for Children's Centers.</u> New York: Author, 1972. Learning through design. <u>Progressive Architecture</u> , February 1972, 53, 86-87.
People Interviewed	Evan Nelson, Director



PROGRAM DESCRIPTION

The educational program in this facility is influenced mostly by Piaget according to the director's description. However, she suggested that because of the long duration of the typical day--10 1/2 hours--the staff employs ideas and concepts from other educational theories. The eclectic approach, she said, helps to bring sufficient variety to the daily routine. The favorite educational approach is a "modified Piaget," called by the director, "teaching at the teachable moment."

FACILITY DESCRIPTION

The program is housed in the remodeled basement of a federal office building in downtown Washington. Even though the area is built intensively with high rise office buildings, the Learning Center has its own generously equipped outdoor area to compliment the interior space.

The interior is basically a single, windowless open space that has been landscaped with platforms of various heights that divide up the space into different activity areas. Small spaces for "children only" are provided and there is an open home-like kitchen surrounded by a counter that is used as the center of the activities area.

After the multi-level platforms and the yard, the most important physical feature is the porch. The porch is wide enough to provide a significant covered play area that extends the potential for using outdoor play as part of the program almost all year.

OBSERVATIONS AND INTERVIEWS

COMMENTS FROM INTERVIEWS

Location

Child care at job location has several advantages. First is the shared time experience between parent and child while traveling. Second is the immediate availability of the parent if something happens to the child that requires parents' attention.

Open Planning and Group Size

Ms. Nelson, the director, suggested that 30-40 children is as large a group as an open planning unit should accommodate. The younger children (2 years olds) are overwhelmed by a variety of things including the numbers of staff, the impact of the older children, the size of the space and the number of children in their own group. Still, open planning has some advantages over contained classrooms. Cross-age grouping for some activities is very good. She believes that it helps social development especially. The following groupings were therefore suggested:

- 3 years-5 years
- 6 years-8 years

Level Changes and Platform Interior Landscaping

The platforms are good but some or all could have been on coasters rather than being fixed features which do not allow any flexibility.

Private Spaces

The private spaces that the platforms make are good. Children like spaces that are obviously "just for kids" where adults can't quite stand up. Too many and too small and enclosed spaces create the potential for loss of teacher's control and visual contact with the children, however.

Equality of Indoor and Outdoor Activity

The program benefits from having outdoor space clearly included as a part of the whole concept for both the facility and the program. A field for ball games should be available. Some of the outdoor equipment should be movable and some loose play materials as well as water should be available.

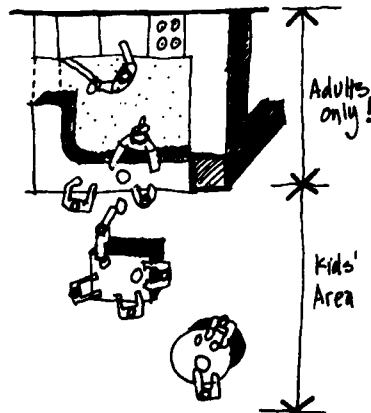
Safety

Children should be taught safety rather than having the facility so overdesigned that it isn't fun or flexible.

Carpeted Stairs

Carpeted stairs are good especially for helping little toddlers develop motor skills. Short flights are best.

A Program Use for a Kitchen



PROGRAMMED USE OF
KITCHEN SPACE

The kitchen with its sink and counters is a prime potential play space for children at home. Some regulations require, however, that children be kept out of the food preparation area. By having the kitchen in the open with an open counter, children can view activities and materials without actually entering the kitchen, and then can experiment and participate in preparation at the adjoining area. Water and counterspace are available and children pick up stuff and take it to their work tables. Children participate in making their own snacks, an important social and confidence building activity.

Counter Heights

Ms. Nelson recommends either having the counter at children's height (regular counters are gigantic barriers) or having movable platforms to pull up to let the children get up closer to adult eye level.

Porches

Ms. Nelson is very happy with the porch to the play yard as a multi use space that



SEATING LEDGE IN THE CUBBIES

significantly extends the potential for "going out" and thus maintaining the outdoor part of the program through more of the year than would be possible if there were a clear demarkation between indoors and outdoors.

Flexibility

More things should be movable for benefit of the children and staff.

Cubbies

Be careful not to build the cubbies too high. The little ones can't reach high storage. Provide a sitting bench to help children get their clothes on and off, located near both the main entry (1st priority) and the playground entry (2nd priority).

HAROLD E. JONES CHILD CENTER

BASIC DATA

Client Institute of Human Development
University of California and Berkeley
Unified School District

Address 2425 Atherton Street
Berkeley, California 94520
(415)642-7031

Director Dorothy Eichorn

Architect Joseph Esherick & Associates/San Francisco

Date 1960

Users Children 3 - 5 years; 100 total, 25 per
half-day in each half of the building

Size ca. 19000 sq. ft. building on a 1/2 acre
site of which the children's indoor area
is ca. 3,800 sq. ft., and the outdoor
play yards total ca. 9,700 sq. ft.

Cost

References Two schools in one. In P. Abramson.
Schools for Early Childhood. New York:
Educational Facilities Laboratories, 1970.
Pp. 5-12.

People Dorothy Eichorn, Director
Interviewed Barbara Scales, Head Teacher



PROGRAM DESCRIPTION

The Harold E. Jones Center houses two mirror-image facilities with somewhat similar programs. The Center opened in 1927 and moved into the present facility in 1960. The building is owned by the University of California. The east side is run as a progressive University Child Study Center--a research and demonstration center. Children are from middle- to upper-middle income families, most of them affiliated with the University. The west side operates as a parent-cooperative nursery school program run by the Berkeley Unified School District. Children are from lower-middle to middle-income families. In addition there are research rooms used by students and faculty of the University of California. Infants are sometimes brought to the center for studies, but are not enrolled in a program. Thus ages are from 3 to 5 (6 in the summer). Children come for a half-day only--3s in the morning, 4s and 5s in the afternoon. There are 25 children in each side at a time, for a total of 100 students per year.

The staff is comprised of well trained, experienced head teachers, most with MAs, some working on Ph.D.s, and graduate student assistant teachers, all under the direction of an on-site Administrator and a Director at the University, who is a nationally-known child development researcher.

PROGRAM PHILOSOPHY

The program of the University Nursery School is designed to enhance the total person of the child--social, physical, and intellectual development. It is grounded in a combination of the theories of Froebel, Montessori, and Piaget. The children's interests are considered primary, though the staff works hard--and successfully--to present alternatives and challenges for development, and, occasionally, more formal preschool activities. The program of the Berkeley School District Nursery puts more emphasis on formal learning about reading, number skills, and problem solving. Parents play an important role in activities.

Research activities are a big part of both programs, in the Berkeley case in lieu of rent, for the Center is also maintained as a research and demonstration school for faculty research, and local and national demonstration projects. The Center welcomes hundreds of visitors from around the world each year, so every day is in part a research day and a visitor's day.

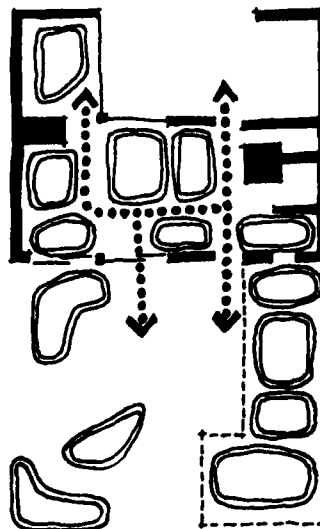
The Center also hosts community-based meetings and workshops on early childhood education.

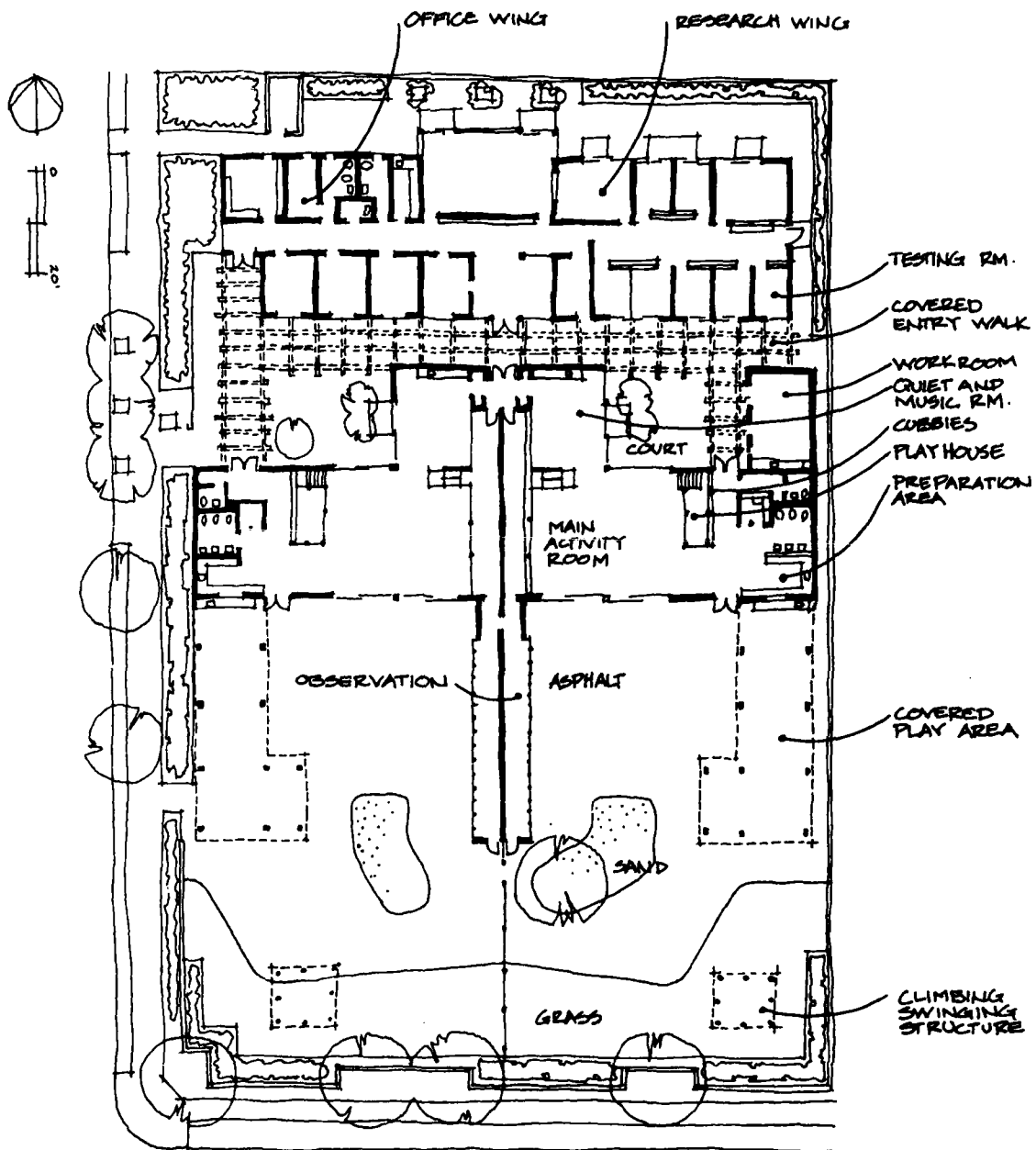
FACILITY DESCRIPTION

CONCEPTUAL ORGANIZATION

The building is a mirror-image of itself east-west, separated by a long, narrow observation corridor. A trellis-covered walkway running east from the street further divides it into children's spaces on one side and staff offices and research rooms on the other.

The main children's activity room is "L"-shaped around an interior court. A large play yard is off the large side of the activity room connected by doors and floor to ceiling small-paned windows.





INDIVIDUAL SPACES

Activity Rooms

The main activity room is functionally subdivided into seven activity areas for the most part by furniture, heavy but moveable shelving, and subtle architectural cues. One quieter room is separated by a glass wall. The areas are:

- blocks, sand, and manipulables area
- mathematics-science area
- arts area
- reading area
- 2-story playhouse
- preparation and snack alcove
- quiet and music room

Thus there is an average of only 3 to 5 children per activity space. These spaces are in total about 3000 sq. ft., or about 100 to 150 sq. ft. per activity plus circulation and storage.

Internal circulation is a well-defined "U"-shaped path from the cubbies around to the quiet room.



Outdoor Play Yard

The outdoor play area is a rectangular 4750 sq. ft. yard with easy access from the interior. Mostly asphalt based and with architecturally less defined circulation or activity spaces, it has a covered "transitional" play area of approximately 1000 sq. ft. (with five activity areas well-defined because of 8 x 8 in. posts), a central sand pit, a large climbing structure on grass, and other scattered equipment, mostly somewhat ambiguous moveable "stage-set" equipment. There is a vague suggestion of a tricycle path around the periphery. The Berkeley side has a large rolled tarpaulin which can be lowered from the covered play area to give wind, rain, or sun protection from the sides.

OBSERVATIONS AND INTERVIEWS

When E.F.L. published a case study of this facility in 1970, Abramson waxed totally enthusiastic about this Center--inside and out--and said that short of a space for parents to congregate, both staffs were totally satisfied with the space and there were no weaknesses.

We were, very unfortunately, unable to see the Center in action as the school term had just ended. But two very kind and thorough interviews given us by the Director and Head Teacher yield a more complex and complete picture.

We asked how the children actually used the space, where--if anywhere--the environment could be said to have a stimulating effect on the children, and what were the best and worst aspects of the facility.

Good aspects far outnumbered bad.

Best Aspects of Facility

- neighborhood setting, in area near population actually using it
- indoor areas flexible and easy to rearrange
- designed for minimum staff if necessary--can see all from one vantage point--even the toilets are open
- playhouse with its two stories is used a lot, and very imaginatively, especially the lower story which doesn't suggest any particular theme
- good balance between large and small areas, potentially noisy and quiet areas
- open quality of space allows free mixing of children on activity basis, yet functional definitions provide clear clues to activity spaces.
- materials and settings have a warm, child-scaled home-like quality, yet the spaces and materials are different from home

- observation galleries are good, and are used by parents with teachers, etc.
- cubbies are handy to entries
- storage is excellent--plenty of it, organized, and visually accessible and enticing
- clear separation between research area and the children's area--entries and doors are clearly seen
- excellent visual connection and free movement between indoors and outdoors
- year-round rain-protected outdoor play area
- large climbing structure allows hanging or attaching other things--swings, nets, cloths, etc.
- good balance between ambiguous and specific play equipment--
- the different sand play areas are excellent--one area inside and four outside--each for 4-8 children at a time, and each with different accessories and equipment

Aspects Needing Improvement

- need area where parents can get together informally with each other and with staff (This stemmed from a staff desire to be able to talk to parents on a regular, informal basis without leaving the area. A home-like kitchen with a table and chairs might have been just the thing.)
- need off-street parking in any busy area
- circulation in outdoor play area may be a problem--a way to run from door to major event like the climbing structure without interfering with other activities; and a clear way to move among activities (observation of actual use would be necessary)
- need outdoor running and trike areas not interfering with other activities--ball games seem to have little sustaining interest for children of this age
- need space, proper exposure, and good soil for gardening

- outdoor transitional play area, or semi-shelter to protect on three sides from wind, rain, and hot sun
- need extensive lockable storage outdoors--comparable to quantity of indoor storage
- need some large trees for natural, filtered protection from sun
- surface of play yard should not be all macadam (asphalt), nor is tan bark acceptable (combinations of some concrete or brick, sand, and grass is better)
- need fence which discourages trespassers and vandals, and yet barbed wire is unacceptable
- drainage must be excellent
- lots of space is required near cubbies, and out of the way of circulation
- separate basins are not as convenient for washing (including brushes, etc.) as one trough
- light bulbs should be protected against shattering
- there might have been too much glass area; in a number of instances small furniture was pushed up against the glass indicating that the window need not have gone to the floor
- as in most children's centers, there was little in the way of natural environments to explore--a space, like the interior court before the entry, might be developed into this if it is large and varied enough

SUMMARY

This is truly a beautiful setting for children. There is plenty of natural light, good indoor-outdoor access, and a strong sense of place for children. The building is unimposing, very much like a home-like background for activity. The scale is lovely, and the wood and architectural detailing reinforce the intimate child scale. The scale and architecture give a relaxed set-

ting which allows the smaller furniture to dominate the space in the minds of the children.

The entire floor space is subdivided into seven distinct functional activity areas and the covered outdoor space is too. Smaller furniture and architectural cues (mostly posts) are used to subdivide these spaces. Most of this furniture is not moveable by the children but the staff move it weekly or monthly to provide interest and entertainment in the environment without making it seem new and confusing every day. Most of the smaller furniture and toys are generally suggestive of activity, and not explicit or unidimensional in use.

Visibility indoors and outdoors is excellent--there is an adult area with controlling views of the bathroom, indoor, and outdoor play areas. The playhouse and general room size allows the development of quiet activities and places for children to withdraw.

Access and visual connection to the outdoor play yard is excellent. The covered play area allows outdoor activity in sun and rain.

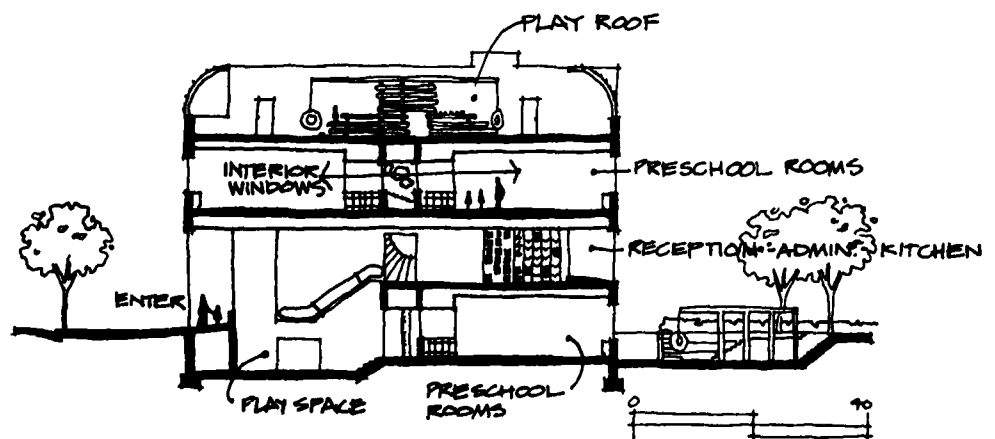
Except for the far less successful play yard, the negative points do not detract from the overall superb architectural quality of this center, though they certainly are points warranting attention in other centers.

HELEN OWEN CAREY CHILD DEVELOPMENT CENTER

BASIC DATA

Client	Park Slope North Child Development Center, Inc.
Address	71 Lincoln Place Park Slope, Brooklyn, N.Y. 11217 (212)638-4100
Director	Adler B. Toussaint
Architect	Beyer, Blinder & Belle/New York
Date	c. 1973
Users	About 200 pre-school children, 35 school-age children, and 45 adults
Size	22,000 sq. ft.
References	Park Slope North. <u>Architectural Record</u> , April 1972, 151, 135.

In perspective. Progressive Architecture, February 1977, 58(2), 26.



PROGRAM DESCRIPTION

One of a series of day care and after school centers for the City of New York, the program separates daycare-preschool services from the after-school drop-in program. Most of the children walk to the facility. The program handles 250 children with a staff of 45 adults. The rate is \$40 a week but most of the parents pay nothing due to various support programs.

FACILITY DESCRIPTION

The facility is a three story building in a residential neighborhood on a small site. One playground is on the roof and a very small playground is located in a tiny backyard. Entry is dramatized, the same as the New Life and Daughters of African Descent Centers, and provides split-level access to two of the three levels. A basic floor consists of six care rooms. Four of them form a module with a shared widened hallway to provide extra bad-weather play space. An interesting feature is the use of interior windows between the rooms and the hallway. The windows "borrow space" from the other rooms. Although the rooms



are basically the same size as those in the other New York centers visited, they seemed larger. The director reported an additional advantage of using the hallways as relatively unobtrusive ob-

servation booths. The ability of parents to observe their children in action is often useful in giving parents and children counseling.

ASSESSMENT

There is a variety of lessons to be learned from this facility.

Borrowing Space

Interior windows can make rooms appear larger. They also can allow informal observation. The view out the door of the room is into a brightly-lighted rather than dimly-lighted wide corridor space that further enhances this effect.

Graphics Make a Difference

In contrast to the New Life and Daughters of African Descent Centers the bold "supergraphics" painted on the wall are important to the spirit of the place.

Double-Functioning Conference Room

The staff conference room doubles as a display gallery for children's art work. It is a good idea and would work even better if the door were directly off the circulation area and not off the hallway.

Sleeping

The director suggested that the required nap time does not fit all children and that not all children can sleep in a room with other children. In a center this large (230 children) the director recommends a place for the "can't nap" children to play (like this center's play lobby) and a quiet room (not used as a punishment room).

Public Telephones/Reception Area

The center supports two public telephones in its reception area. The reception area could function as a parent's room if it were furnished.

Teachers Stations

Teachers need storage for their winter coats and purses, etc., in their care rooms.

Noise

The center does not have sound absorbing ceilings and is noisier than it should be.

Floor Color

The light floors are difficult to maintain. A darker floor would be easier to maintain.

Flexibility and Moveable Millwork

A lot of things that could be built in millwork should really be moveable to provide some flexibility to the care givers in personalizing and arranging their rooms.

Irregular Rooms Preferred

The corner nooks in the otherwise regular and almost square rooms that are made by putting the toilets in the other corner become important activity spaces and facilitate zoning of activities in a way that a simple rectangular shape couldn't.

Location of Director and Bookkeeper

The director and bookkeeper should be located at the reception entry.

Roof Play

Nothing but trouble with the roof play area. The "Latroturf" surfacing cracks

and leaks, in fact the opening of the whole facility was delayed because of the roof leaking. Unfortunately, it still does. There is also some doubt as to whether or not the roof could actually support the proposed play equipment.

Maintenance of Lights

A simple error that costs the center a lot of money is the location of lights in the two-story lobby. They cannot be changed without erecting special scaffolding and taking a full day to do it. This is too much money for a day care center to absorb for simply changing a light bulb.

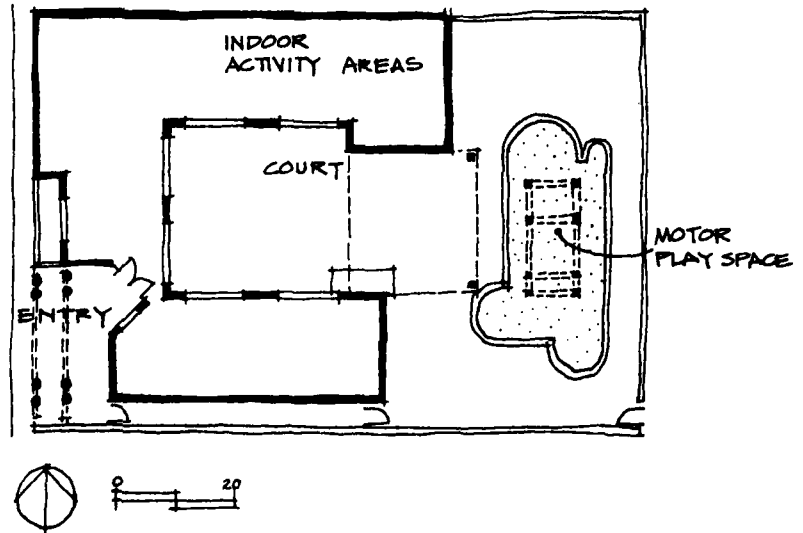
Kitchen and Food Programs

The kitchen is large and well equipped. Since the center shops for its own food on a very tight budget, adequate storage space, both cold and dry storage, is absolutely critical.

MISSION ANNEX NURSERY SCHOOL

BASIC DATA

Client	San Francisco Children's Centers, San Francisco Unified School District
Address	421 Bartlett Street San Francisco, California
Director	Kristine Simmons
Date	Mid-1970s
Users	Preschool age children, mostly 3-5
Size	ca. 4000 sq. ft. on a 1/6 acre site
Cost	Not available



FACILITY DESCRIPTION

This is a wood frame structure basically with its back to the street and opening onto a partially covered central court and play area. Each of the indoor activity spaces is focused on the court. The building is flush with the front and side property lines, except for an angled set-back entry and a service path. A 6 ft. wooden vertical slat fence masks the service area and separates the play area from a back lane. The scale and basic roof shapes are in the character and scale of a contemporary house.

Interior circulation is around the window walls, with one and two-story activity spaces in recessed areas.

ASSESSMENT

This facility, which we only saw from the exterior after school hours, is a pleasant building, nicely scaled and detailed. Its strong back to the street and high fence around the play area seemed in response to general neighborhood vandalism and a tight site. A very inward-looking scheme, and the indoor-outdoor relationships seemed strong. Curiously, the partial outdoor roof neither connected to the exits from the activity spaces, nor did it cover the main play area, though it did allow light into the interior windows.

The outdoor play area was handsomely constructed and well detailed, but seemed to be oriented only to large motor development.

The scale and integration with the neighborhood in a contemporary idiom seemed the strongest features of this modest scheme.

NATIONAL CHILD RESEARCH CENTER

BASIC DATA

Client National Child Research Center

Address 3209 Highland Place, N.W.
Washington, D.C. 20008
(202) 363-8777

Director Emily MacCormack

Architect Chapman & Miller/Washington, D.C.

Date Initial remodeling 1930

Users 120 pre-school children

Size ca. 4,000 sq. ft.

References Educational Facilities Laboratories.
Found Spaces And Equipment For
Children's Centers. New York:
Author, 1972. Pp. 13ff.

People
Interviewed Emily MacCormack



PROGRAM DESCRIPTION

The original goal of the National Child Research Center was to provide a space and a program where young children could be observed in a preschool setting. The original school received a variety of research grants and was used as a laboratory setting for several universities. The current program still delivers preschool education but no longer seeks research grants. The students are mostly middle class with about 10% minority and occasional handicapped children. The philosophy of the school is eclectic emphasizing both individual attention to children's needs and social situations for children to participate in. Thus the daily routine emphasizes development of communication and social interaction skill.

FACILITY DESCRIPTION

OVERALL CONFIGURATION

The program is housed in a handsome Victorian mansion on a generous heavily wooded suburban lot. The original house was remodeled specifically to provide centralized observation booths for research. The current director's office was moved from an isolated location at the back of the building to a place right next to the entry (very similar to Fort Hood).

The facility includes a generous yard that has many large trees. A special aspect of the program is the use of a cottage at the rear of the site as a combined kitchen, dining, and napping facility. The director asserted very strongly that the separation of the two areas created an important break in the children's day for both eating and napping that contributed very positively to managing the flow of the day's activities.

INDIVIDUAL SPACES

The individual spaces benefit from the qualities of light, windows, and level of detail that were a part of the original structure. More importantly, there seems to be clear space usage benefiting from the implied spaces that the vestigial walls, porches, bay windows, found corners and unused hallways provided by a remodelled facility. Some "classes" use and move through several adjoining rooms which easily accomodate potentially conflicting activities.



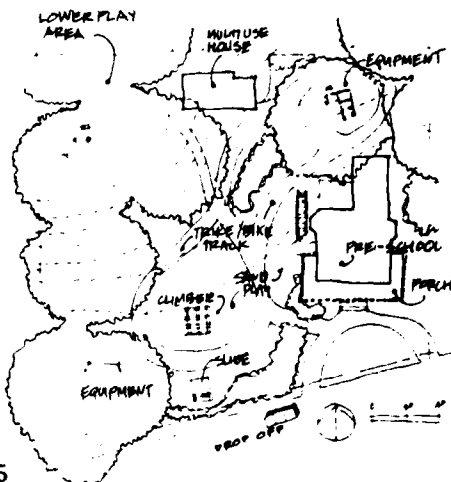
A porch about 6 ft. wide surrounds most of two sides of the house. It is an important flexible activity space for both good and poor weather. The individual spaces are arranged into activity areas by low storage and play kitchen equipment. The center has collected a more than adequate amount of play equipment, low dividers, and toys. There is a current program for adding outdoor play furnishings to the several they already have.

ASSESSMENT

Importance of the Porch

In addition to the fact that a Victorian house can be remodeled into a very usable preschool, the porch deserves special mention. It is truly a multi-functional

place, providing a transition zone for entry into the building, an informal meeting place for parents and leaders, an activity center for some art and building play, a large-muscle play space on days when the grounds can't be used, and a general activity space for use during scheduled outdoor time.



315

Importance of Outdoor Areas

The planned use of outdoor space is an integral part of the pre-school program and is not an extra amenity.

Importance of Atmosphere

The facility benefits from a positive home-like image in the minds of the children, the staff, and especially the parents. The director finds that anything like colors or windows or natural light that makes association with interesting home-like settings in a definite advantage to the program.

NEW LIFE CHILD DEVELOPMENT CENTER

BASIC DATA

Client Woodbine Block Association

Address 295 Woodbine Street
Brooklyn, New York
(212) 821-3448

Director Leslie Wood

Architect Paul Heyer, AIA/New York

Date 1972

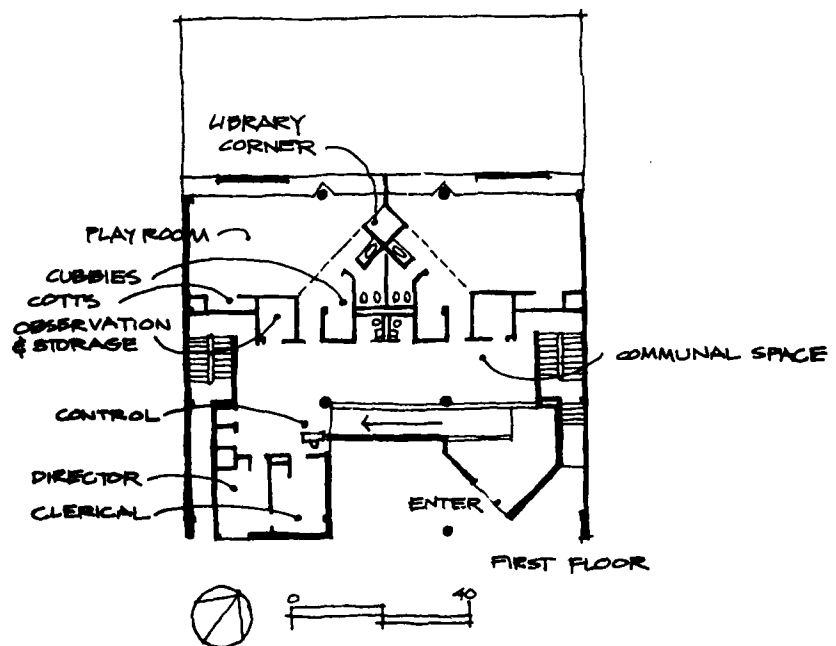
Users 110 inner city children, ages 3-12

Size ca. 12,000 sq. ft.

References For kids in Brooklyn. Architectural Review, June 1976, 952, 384.

Active spaces. Interiors, December 1975, 135(12), 84-87.

The New Life Child Development Center. Progressive Architecture, February 1977, 58(2), 27.



PROGRAM DESCRIPTION

This is one of a series of day-care and after-school centers for the City of New York. The program separates physically and conceptually day-care and preschool activities from after-school drop-in activities. There are 95 preschoolers in an all-year program, 3-5 years old, and 65 after-school users, 6-12 years old.

FACILITY DESCRIPTION

SITE AND CONFIGURATION

The facility is a three-story building on a tight urban site in the Bushwick section of Brooklyn. The dominant feature from the outside is the entrance forum and the adjacent large communal entrance.



On the inside, each floor has a large, communal space, a widened hallway for bad-weather use, and during the visit the forum was being used as a three-wall handball court. A roof play area supplements a dismal, paved outdoor play area on the ground floor at the back of the building.

ASSESSMENT

Several aspects of the building deserve note:

Maintenance

The building did not show its 6 years of heavy use, even though it had not been painted since completion. Very dark, burnt-maroon brick cladding was used indoors and out. Painted concrete block surfaces followed the same dark burnt-brown color scheme supplemented by navy-gray. The color scheme could have been awful and dreary but for some reason wasn't. Perhaps the windows which stretch across the rooms help. Still, it was not a cheery building compared to others the team observed.

Kitchens

Kitchens and nutrition programs are an integral part of a facility's program. Feeding the 170 children and 28 adults that populate the building requires an institutional kitchen (like the one at the new facility at Bolling Air Force Base) and not just a large family kitchen.

Multi-purpose Spaces

The multi-purpose spaces in this building are not large enough to be effectively used for activities.

Staff Spaces

Facilities that deliver a wide range of services to the children and their families like this one require more adult space than expected. The New York City centers that were observed, Helen Owen Carey, Daughters of African Descent, and this one, all had 6-10 rooms specifically for staff, administrators, and special programs.

Child Scale

The preschool rooms included a room with a intermediate floor added so that it would provide a small child-sized reading nook. The nooks looked usable and used but also had an institutional appearance because of the materials and detailing.

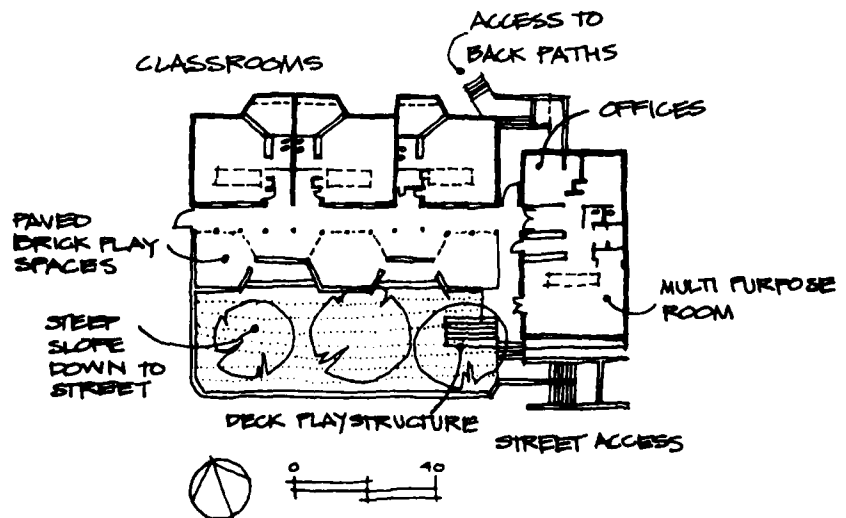
Wall Space Energy Conservation

The walls that would ordinarily be all glass in a traditional school room have been redesigned as a combination of clerestory windows and windows to see out. There are two benefits from this: reduced energy loss and heat gain because of less overall window area, and additional display space or storage space which are two features frequently requested in teacher evaluations of preschool facilities.

NORTHRIDGE CHILDREN'S CENTER

BASIC DATA

Client	San Francisco Children's Centers San Francisco Unified School District
Address	Captain William P. Shorey Bldg. 1030 Oakdale Avenue San Francisco, California
Director	Kristine Simmons
Architect	Marquis & Stoller/San Francisco
Date	1971
Users	Preschool children 2-1/2 to 5; after school up to 12
Size	ca. 4,000 sq. ft. on a steep 4 acre site
Cost	Not available
Reference	Child Care Centers. <u>Architectural Record</u> , March 1971, <u>149</u> , 136-137.



FACILITY DESCRIPTION

A brick bearing wall structure on a leveled area of a very steep hill, this children's center is walled off from the surrounding community. Above it is very fine row housing (also by Marquis and Stoller) while below is burned out and destroyed housing.

Controlled hard surface play areas are adjacent to each of four interior activity spaces, and serve as the only circulation between spaces. A multi-purpose room is used for activities, eating, and final food preparation (trucked in from a central kitchen and warmed at the center).

The very steep slope of the site is used to provide additional play space on a deck structure under existing trees.

ASSESSMENT

Another after-hours cursory visit (once called a "drive-by"), it is impossible to evaluate this center through the activities of its children. A few impressions, nevertheless.

The quality of the interior spaces was mixed; nice natural lighting fell on rooms which at 500 sq. ft. seemed too large and undifferentiated from our earlier case studies

The "L" shape to the building (a product no doubt of the very steep and tight site) left the multi-purpose room isolated from the other activity spaces, and the offices hidden down a separate corridor caught in the crook of the "L".

The lack of visual connection or ease of movement between rooms would have bothered children and staff in many other centers, but might be an advantage here if the center is run as a formal academic pre-school.

The play spaces seemed totally lacking in stimulation, challenges, or even opportunities of things to do. The small designed pathways on the hill behind the center linking it to adjacent housing were unusually varied, child-scaled, and rich in possibilities for children's exploratory and fantasy play, and indeed it was here that most of the children were seen.

SUMMARY

This is a nice modern building, somewhat walled off from the surrounding community, which seems not to have been greatly influenced by the needs of children in the social interaction and cognitive exploration phases of their development.

As a medium-sized center, it gives--to the adult--a feeling of a smaller center by strongly separating activity rooms, but this creates problems of circulation, staff interaction, and informal contact among children. It has good indoor-outdoor connection, but the outdoor areas are not well developed for play or child development

It looks nice architecturally, but still it seems not as relaxed or child-scaled as it could be. As an attempt to simulate a residence--which was Architectural Record's assessment of it in 1971 --the building is a bit too formal, large, and harsh.

PACIFIC OAKS COLLEGE CHILDREN'S SCHOOL

BASIC DATA

Client	Pacific Oaks College
Address	714 W. California Boulevard Pasadena, California 91105 (213) 795-9161
Director	Ulanda Torres
Architect	Anonymous, with renovations and play yards by parents and staff
Date	1945 with constant minor changes since
Users	About 200 diversified children 6 wks.-9 yrs. in 4 different programs from infants to extended-day programs; 11 head teachers and various staff aids
Size	5 buildings varying from 1000 to 7200 sq. ft. plus seven play yards from 4000 to 15,000 sq. ft. on a 1-1/2 acre site
Cost	Not known
References	Educational Facilities Laboratories. <u>Found Spaces and Equipment for Children's Centers.</u> New York: Author, 1972. Pp. 49 ff. Taylor, A.P. & Vlastos, G. <u>School Zone.</u> New York: Van Nostrand Reinhold, 1970. Pp. 30 ff.
People Interviewed	Ulanda Torres, Director Elizabeth Prescott, Director of Research Several children and teachers

PROGRAM DESCRIPTION

HISTORY

Pacific Oaks College and Children's School began in 1945 as the Pacific Oaks Friends' Nursery School founded by seven Quaker families in the Pasadena hills north of Los Angeles. Some of the families lived in the four former houses which comprise the main part of the school. They were pacifists who during the War wished to raise their children in an atmosphere of peace. They used the backyards between the four houses together with the porches and the former lane as their Nursery.

Under the first director, Evangaline Burgess, fame quickly spread that this was indeed a place where children were treated differently, where they were listened to seriously, and given messages that they and their ideas were important. As more and more people came to be part of this educational experience, nursery-school services and workshops were given, which later led, through a series of steps, to the founding and incorporating of Pacific Oaks College.

The College, still small and intimate, is comprised of two small campuses woven out of Greene and Greene houses and other fine old simple California redwood and cedar homes. Spiritually, the Children's School remains at the heart of the College, but beyond this, both are part of a community of children, parents, students, professional staff, and researchers all committed to human development. The College takes students only after they have completed two years of college elsewhere, is highly selective, and offers degrees--B.A., M.A., several specialized teaching credentials, and an external Ph.D.--only in Human Development. The distinction with education is felt strongly. The faculty still believes that a teacher or worker with other children must know the whole of the life continuum.

Although the School and College are no longer formally Quaker, a few staff members are Friends, and the spirit of its' history shines clearly.

PARTICIPANTS

There are four developmentally-oriented programs at the School:

- two infant-toddler groups, 6 wks.-2 yrs.
(see also Pacific Oaks College Infant Care Center)
- four preschool groups, 3-5 years
- two kindergarten through grade 3 groups, 5-9 yrs.
- one day-care group including after-school extended day care

There is also a small transitional program between toddlers and preschool. Between 125 and 140 children from infancy through 9 years of age are enrolled in groups of about 15 with a head teacher and several student assistants. The staff-child ratio is a very enviable 1:4 or 1:5 and 1:2 for infants.

The head teachers all have M.A.s in early childhood development. Aids have a minimum of 2 years in child development all the way up to returning experienced teachers who are M.A. candidates.

Children are selected to insure a range of cultural, ethnic, socio-economic, multi-cultural, and special needs backgrounds.

GENERAL PHILOSOPHY

"At Pacific Oaks we care about people rather than things," reads one teacher's statement, while another says, "Yes, we manipulate environments but not children."

The values underlying the Pacific Oaks' Children's School are:

- the belief in the unique importance of every human being
- the feeling of brotherhood with all persons everywhere
- the acceptance of simplicity and harmony as intrinsic to living the good life
- the understanding of development as a lifelong process

Children, parents, students, staff, and researchers all share in a process which can best be described as "responsible community living" from its beginning in the family to its application in the larger world community.

Programs are arranged to give children abundant opportunity to experience the world they live in--both the physical and social worlds. Children are encouraged to form their own understandings of how people and things work. They test their ideas with each other, and what is gained is real experiential knowledge--knowledge of, not just knowledge about, as John Dewey might have said.

Natural, simple, and authentic environments are highly prized. In the family, and at the School, the child learns about social situations and physical events by watching, thinking, feeling, explaining, testing, imitating, questioning, criticizing, and cooperating.

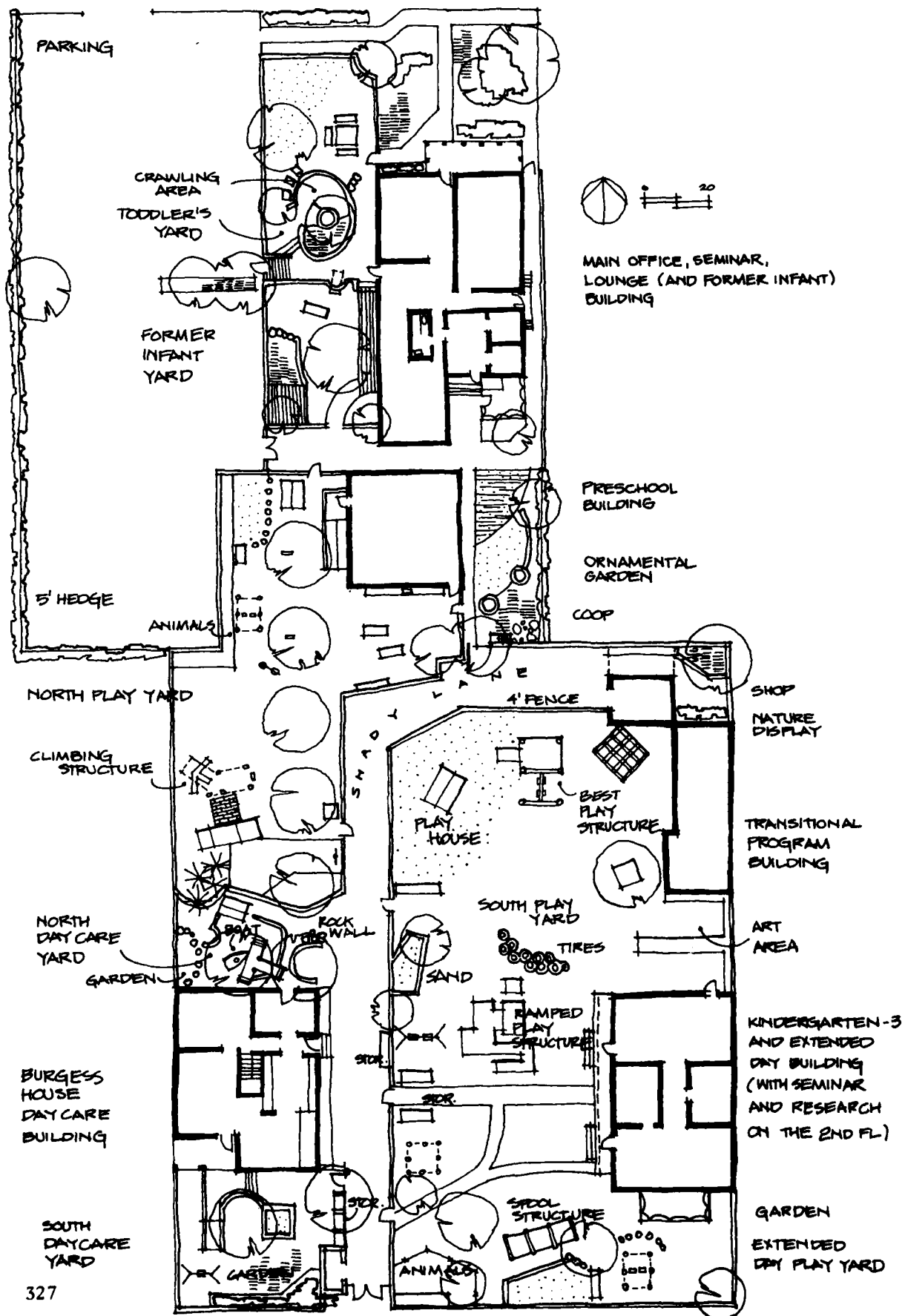
Based on a philosophy of human equality, harmony, and peace, there are no competitive games, no winners and losers, and guns are not allowed. Hurtful acts are diverted into a constructive resolution and children are encouraged to settle their differences, not exacerbate them. Everyone is on a first name basis. There are no grades but there are extensive written descriptions and suggestions. And all decisions are made in the Friends' tradition of consensus meetings.

The Infant/Toddler Program

For the infants and toddlers, learning in the natural outdoors is stressed, while parents are involved in a staff-parent cooperative forum.

The Preschool Program

For the preschoolers, development of self-image and socialization skills are emphasized through language, dramatic play, listening and reading, problem solving, and exploration with open-ended materials and environments.



The Kindergarten and K-3 Programs

For the K-1 and K-3 children, the use of manipulatives and language experience and reading are part of the foundations of an academic program. Mathematics is introduced gradually in a non-stressful, non-competitive way related real-world situations. Group social consciousness is also emphasized.

The Day-Care and Extended Day-Care Program

For the day-care and extended day-care children, a wide variety of developmental experiences are provided, including structured and unstructured periods, active and quiet times, helping with meal planning, food preparation, and other typical home experiences, and sharing in a vibrant day-long micro-community of children of various ages, staff, and students.

Mainstreaming

Their concept about mainstreaming for their several special children is to stress what is normal about a child and make minor modifications for handicaps as necessary.

FACILITY DESCRIPTION

The children's School is a cluster of 1930s redwood and cedar houses on a wooded site (Pacific Oaks) in the residential area of Pasadena, California. Though in a hilly area, the 170 x 400 ft. 1-1/2 acre site is level and just slightly pitched to the south.

Off-street parking and space for dropping off children are provided at the northwest corner of the site, from which entries lead past the main office building directly to the play yards. A little-used formal walking entry leads to the main office building. Another entry leads directly to the play yards on the south end. Over 3/4 of the site is devoted to the seven outdoor play yards.



First--and Remaining--Impression

One's first impression of the site is of a number of small, intimate outdoor spaces filled with quite active children. The spaces are defined by the natural features of trees, rocks, and redwood fences. The visitor can't see very far for the heavy foliage and pattern of filtered light. Later a few humble redwood and cedar buildings appear through the trees, staff members are seen to be working closely with the children, and the full diversity of the School emerges.

CONCEPTUAL ORGANIZATION

The site is organized along a central spine from the parking lot and north entry to the south entry--this is known as Shady Lane and was indeed a former public-access lane. Conceptually on the four corners of the site are the four primary buildings (and a small fifth building). Between the buildings, linking them to each other and to Shady Lane, are extensive play yards. Thus as a child, parent, or visitor enters the site, they move along Shady Lane to the play yards, and pass through the yards to the steps and porches of the various buildings.

The buildings, respective play yards and programs are as follows:

- A: former infants and toddler's programs and main offices, lounges, and seminar space for students
- B: preschool program
- C: day care program with offices above
- D: kindergarten and extended day programs with research offices and student seminar spaces above
- E: transitional 4 year old's program and shop

The buildings are all rustic 1- to 2-story wood-frame structures. Each has a variety of internal spaces. Every entry-exit to the outdoors has a porch or series of steps used as an activity space. Texture is everywhere--in the horizontal redwood and cedar siding, the small windows, overhanging

eaves, cedar shingles, wood fences, wood decks, wood play equipment, brick and stone walls, and the lush vegetation.

INDIVIDUAL OUTDOOR SPACES

As the most important spaces of this School are its outdoor play yards, though the indoor spaces are very good also, we will describe the play yards in greatest detail.

Shady Lane

The lane which connects all the play yards is lined with 4 ft. wood, brick, and stone walls, gates to the yards, and the porch and steps of the day care building. The surface is a packed sandy soil. Trikes and wagons line its length. Large outdoor storage bins are built into the wood fence at various intervals. The width varies from 10 to 15 ft., and it is indeed shaded for most of its length by large oak trees.



Infant and Toddler Play Yards

On the north of the site, immediately adjacent and connected to interior spaces are the 35 x 45 ft. infants' play yard and

the 35 x 70 ft. toddlers' play yard. The former is primarily a wood deck and grass play area contained in a curved brick wall, a sand and grass play area, and a set of large textured steps for crawling. The latter is comprised of a large sand box and small-scale climbing apparatus. Various small tables and easels dot the yard.



North Play Yard

Associated with the preschool, the north yard is comprised of a 5 ft. high, 70 ft. long, "L"-shaped animal hutch and lots of area to tend to and play with the ducks, rabbits, and other small animals kept there, a 3-story climbing-swinging-jumping-play structure made of wood with an 8 x 8 ft. central cargo net, storage below the structure, several tree swings, a pair of basketball hoops, various activity tables, and some open areas for small, informal ball-games.

North Day-Care Yards

Just north of the day-care building, this quiet and intimate yard is dominated by a boat, spiral ladder, and look-out tower built around a tree. A 3 ft. high stone wall around another tree provides casual sitting space a few feet away from outside easels attached to one wall of the building. Across the 30 ft. western outside fence is a garden of vegetables, corn, sunflowers,

and squash. Low tables, milk crates as chairs, and another play house complete the yard.

South Day-Care Yard

This 45 x 50 ft. yard is the smallest, and most secluded and private of the play yards for the preschool-aged children and is made up of two main areas: a large outside deck raised two small steps off the ground with adjacent open storage shelves; and a small play area with a 40 ft. garden of herbs and small vegetables and bamboo on one edge. This yard is used by the younger day-care children.

South Play Yard

Across Shady Lane is the largest and most open of the play yards, the 80 x 120 ft. South Play Yard. Used by both the 4 year-old transitional program, and the kindergarten program, it has a swinging-climbing-sliding structure with sand underneath, another swing set in the trees, an art area with protected wooden lockers for storage, a play house, several open sand areas, and on the other side of some sand-filled tires on the ground as a partial barrier, a large open informal play space, and a climbing-chasing structure built of 12 degree ramps with physically handicapped children in mind. As with the other playyards, the surface is a packed combination of sand and soil, and circulation paths to the main building are clearly though subtly differentiated from activity areas. Due to the recent loss of a giant oak tree, this area is the sunniest, most open in feeling, and hottest of the yards.

Extended Day Play Yard

The southern end of the South Play Yard, only separated by a subtle path to the kindergarten-research-extended day building is the seventh play yard, comprised of a small 20 ft. animal hutch in an enclosed area, several large-muscle structures made of giant 12 ft. cable spools massed upwards on their edges on top of each other, an 8 ft. climbing structure, a treehouse, garden and open space.

Yard Near Main Office Building

The final yard, to the south of the main office area, is a combination garden, outdoor lunch area, and includes a small fruitstand used as a food cooperative among the friends of the School.

BUILDINGS

As mentioned, each building is a minimally changed former house. Upstairs bedrooms have become offices or two combined and the wall removed to make a seminar room. Lower kitchens are still used by staff and children to prepare snacks and lunches, old open box shelving has been expanded for children's materials, living rooms have become activity spaces, and so on. In a few cases, like the Burgess House (see plan), parts of former walls have been removed to provide open connections between adjacent indoor activity spaces, while still allowing spaces to retain their character and definition.

OBSERVATIONS AND INTERVIEWS

Spending a full day at Pacific Oaks, we were able to devote a morning to interviews and a full afternoon to observations of the children's and staff's use of space. Findings follow which seem to set Pacific Oaks apart from other child care centers.

OBSERVATIONS OF USE

Outdoors/Indoors

Given that the outdoor play yards are about three times as large as the buildings, it came as no surprise to see roughly the same relative use. Of all the centers visited, this one clearly made most use of its play yards; in fact, they became the spiritual focus of the School's activity space.

The yards are where parents and staff meet to informally chat as they walk down the Lane, and they are where informal, important interchanges happen among staff. Whereas

at most centers--including others in equally warm climates--the building is the center, the "entry" is to the building and yards are on the periphery of the site, and little used, at Pacific Oaks the form is totally turned inside out with the buildings on the outside and the yards being the core. Food is prepared inside, though much of the time snacks are brought outdoors and eaten around informal tables. Quiet activities happen in both places, though napping and most reading happen indoors. Art seems to happen mostly out of doors in natural light. Given the large amount of space outdoors, large-muscle and boisterous activities happen almost exclusively there.

Differentiations Among Yards

Children were seen to move freely between yards, and to use Shady Lane as both circulation and activity space, though they spent most of their time close to their own home building. What we began to realize was that each yard was developmentally-appropriate for the primary group using it, and yet that each yard provided different things to do and thus attracted children from different age groups. Fences and casual, self-closing gates helped to separate yards and yet to provide ease of movement. Careful use of design cues, like the row of tires in the south yard and the rock wall in the north day-care yard help to further differentiate between activity space in the same yard.

The Importance of Shady Lane

Shady Lane is one of the most effective organizational features of this School. Multiple-functioning as circulation, entry/transition area, and meeting and talking area for parents and staff, it also provides an ideal activity space for trikes and wagons. Considerable cooperative play was seen here (Pacific Oaks encourages this in part through providing wagons and flat "people-beds" rather than speedy modern trikes). As it is hard, slightly tipped to the south, connected to all other activity spaces, is linear, and is wide enough to accomodate two-way traffic, it is naturally an ideal

place for wheel-toy play. In addition, there are lots of places for children to watch what's going on from walls, steps, behind open slat fences, etc., always an important part of development.



Porches, Decks, and Steps

Porches, decks, and steps served as places for a staff member and child to sit quietly and talk, or for the staff member to point out to a child what other children are doing, and gently encourage choice among options, and as brief waiting spaces for the arrival of expected parents, i.e., they functioned truly as porches do in residential areas.

Separation of Infants/Toddlers from Older Children

The siting of the play yards not only separated the infants and toddlers so they could not be bowled over by the bigger children, but also isolated them from all but the remotest possibility of cross-age contacts (see site plan).

COMMENTS FROM INTERVIEWS

North Yard the Best

Both interviewees agreed that the north play yard was the best of the seven. Reasons given included the extensive animal area,

the variety of the things to do, the good flow between activity areas, the amount of things suggesting cooperation and sharing, the child scale, the shade, and the awnings off the west side of the preschool providing places for conversation.

Importance of Outdoors in General

Everyone mentioned the importance of outdoor play and activities. Air, soft ground cover, no ceiling, and heavy foliage make an ideal acoustic environment. The amount of space, number of distinct yards, and internal differentiations allow children and staff to do a wide variety of noisy to quiet activities, and group to individual activities without bothering each other. Children can be messy, noisy, or quiet with nature without anyone being perturbed.



Best Piece of Equipment



The piece of equipment judged by the staff to be the best was the combination platform-slide-swing structure in the south play yard near the 4 year olds' building (see site plan and photo). We observed why: the swing has a view of other activities. The platform is used for fantasy, and for just watching other children. The platform is large enough that it provides a place to chicken out. The variety of materials--all natural--provides tactile and sensory experiences. The sand underneath provides quiet imaginative play opportunities. Finally, the paral-

1el organization of platform and swings allows children doing different things to watch and talk to each other. No one is isolated, everyone is brought together, and yet diversity of activities is supported.

Indoor Space

Secondary space is important. The staff requested the ability to empty a space to allow for large-muscle activity (e.g., dance) and group rainy-weather play.

More space per child is needed for full-day care than part-day--35 sq. ft. per child is not sufficient, they felt; they need 40-50 sq. ft. per child for effective full-day care.

Keep in Mind How a Home Works

Day care should provide what a good home provides--including comfortable adult furniture ("it's a long day"), an open kitchen, and storage, some open, some closed for control and access, and private children's storage including for oversized art pieces. Small spaces are necessary for reading, cognitive activities, and quiet pursuits. The overall guide, Elizabeth Prescott offered, is to "keep in mind how a home works."

Adult Areas

Every center, they felt, needs some adult area for staff meetings, parents groups, and just to break away. Though respecting these places as adult areas, children should nevertheless always be able to know where adults are going to be.

Entry

A good example of an entry configuration, whether it is entry into an outdoor or indoor space is shown in the accompanying diagram. Shady Lane with its 4 ft. fences functioned beautifully in this regard. To a lesser extent, the kitchen with partial openings to other rooms encountered immediately upon entering the day-care building served in the same way.

Ratio of Activities to Children

It was suggested there should be a 5:1 ratio of possible things to do for the number of children present in any space.

Territoriality

The only territorial spaces thought to be valuable were the adults areas, children's personal storage, and a bounded nap-time area. It's not necessary for the same child to always have the same napping space--a few choices are good--but the area should be clearly bounded from other areas.

ASSESSMENT

The Pacific Oaks College Children's School is a most remarkable facility for all the programs it houses: infants/toddlers, preschoolers, kindergarten, day care, after-school care, parent groups, student seminars, and research. For all the reasons mentioned above, it is perhaps the best example of physical design for child care in the country.

The process of design at Pacific Oaks is interesting. No master plan has been adopted; no architects retained. As mentioned, the early history of the School evolved around the four former houses, their backyards, and a communal lane. All additions and changes have been evolutionary and incremental. All work has been done by parents and staff; all design likewise. The School feels fortunate to count two architects among their parents, and they have assisted in design and construction of equipment, and yet they acknowledge that one of the best pieces, the parallel platform-slide-swing structure was designed by a non-designer parent.

LESSONS

Several lessons which can be applied to new or renovated facilities will be summarized--the details are above:

- a program philosophy emphasizing co-operation requires design to encourage cooperation
- small indoor and outdoor activity spaces encourage small groups
- a variety of programs can benefit by proximity
- simplicity and harmony of design seem to make for a calm and peaceful setting
- settings for dramatic play encourage the development of self-image and social awareness, and are valuable in indoor and outdoor settings
- for the most part, mainstreaming doesn't require special situations or facilities
- home-like settings are especially valuable for full-day care children, including opportunities for participation in food planning and preparation
- drop-off parking allows parents a few minutes with staff and children
- entry along a spine and into a casual space with visual connections to children's activity spaces allow parents to see what's going on without disturbing children or staff
- medium low foliage provides acoustic and partial visual barriers while allowing awareness of neighboring activities
- outdoor activity spaces, if well sited, landscaped, and differentiated from each other, provide a wealth of developmental opportunities hard to replicate in indoor spaces
- child-scale environments can be achieved relatively easily in a house vernacular and with fine-grained, natural materials
- sitting walls or other similar places near activity areas provide unobtrusive watching places for children

- a wide linear "lane can double-function as circulation and as activity space for wheel toys and certain games
- packed sandy soil works very well as the main base for play yards
- 70 linear ft. of animal hutch is not too much for 24-30 preschoolers
- private adult spaces should be providing, but in a location where children know where adults are
- private children's storage should include space for oversized art work
- specific fantasy-type equipment (the boat and look-out) may not be as conducive to fantasy play as slightly ambiguous settings (like the simple, open-fronted play house)
- careful positioning of a few tires in sand, or of a circulation path, can effectively differentiate activity areas
- services and facilities for parents can aid in the formation of community (food coop, parent groups, seminars, opportunities to help in design and construction, etc.)
- partially separated, partially inter-connecting spaces can provide special places for activities and yet encourage movement of children across peer lines
- correct siting and landscaping (per several of the above) can make or break an otherwise good building design
- porches, decks, steps and spaces defined by large overhangs or awnings and spaces are important transition, activity, talking, and watching spaces
- too great a separation of spaces eliminates cross-age contacts and stimulation
- outdoor storage should be large and locked

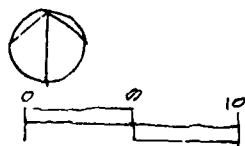
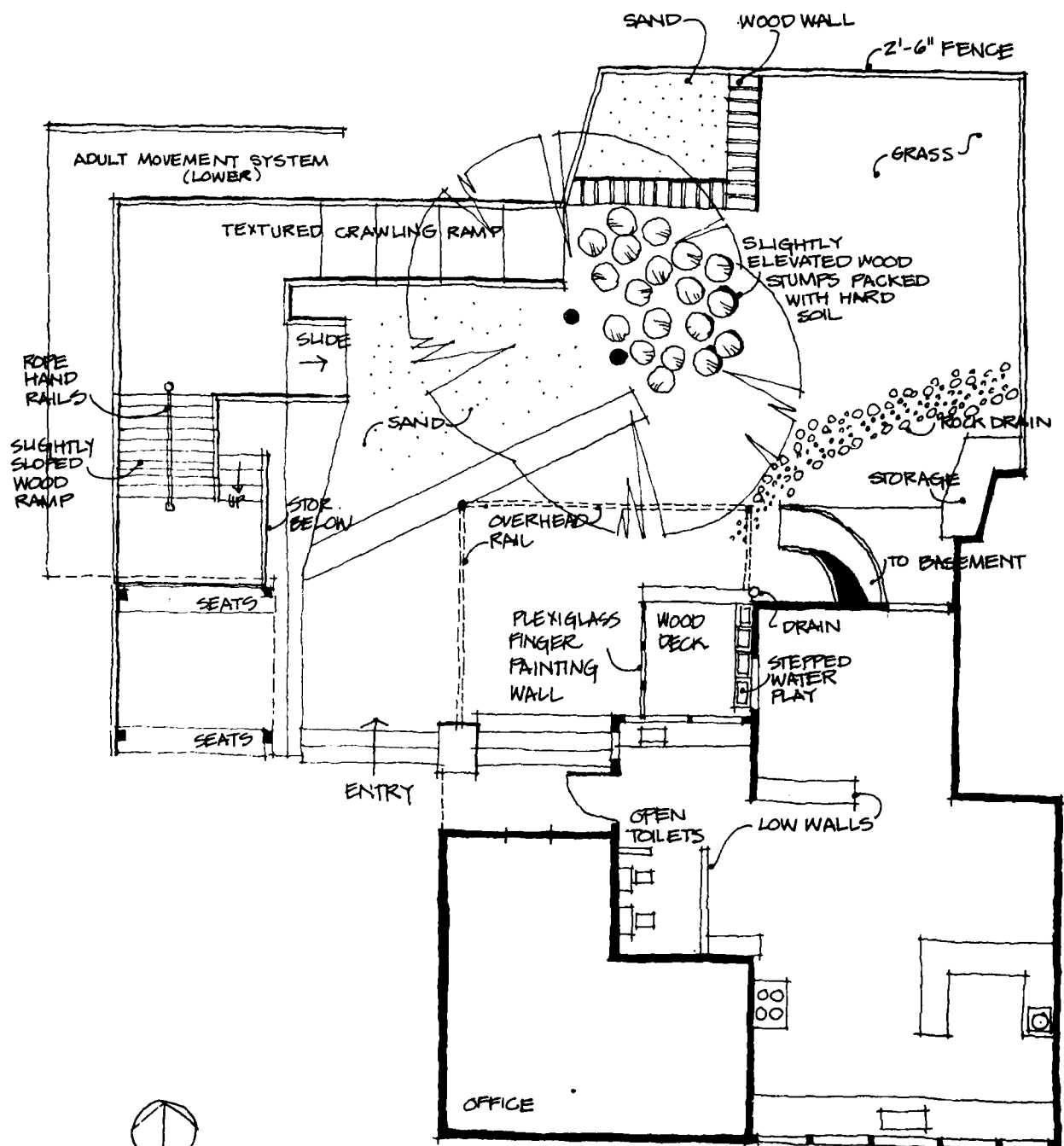
- equipment with multiple uses, with parallel uses, and with "breakaway points" will be judged superior developmentally to other types of equipment
- the ability to clear out a space is important for indoor dance and drama
- more space per child is needed for full-day then part-day care and should be in the neighborhood of 40 to 50 sq. ft. per child
- nap areas should be bounded and clearly differentiated from other spaces
- incremental growth and evolution through parent and staff involvement helps lead to the formation of community

PACIFIC OAKS COLLEGE INFANT CARE CENTER

BASIC DATA

Client	Pacific Oaks College
Address	6 Westmorland Place Pasadena, California 91103 (213) 795-9161
Director	Jerry Ferguson
Designer	Jerry Ferguson
Date	1977
Users	Infants 6 wks.-2 yrs. in 2 sections of 17 infants each
Size	ca. 1500 sq. ft. outdoor space and 700 sq. ft. indoors on a 1/20 acre site
Cost	Not available
People Interviewed	Jerry Ferguson, Designer





INDOOR SPACES

The indoors is made up of two small inter-connecting activity spaces, a small kitchen, an open changing area, and infant-height toilets.

ASSESSMENT

Unfortunately our visit coincided with an off-day for the infants. The very interesting and reasonable developmental hypothesis underlying the organization of the site offered to us by the environmental psychologist/designer could not be assessed through observing actual use.

Indoors, the only interesting feature was the open changing and toilet area to minimize the isolation effect of toilet training, allow free talk while on the potty, and generally demystify the toileting process.

Outside, the environment was soft and rich in the now familiar Pacific Oaks' style, although unlike the Children's School, this area was designed and built from scratch. Natural textures were everywhere, and the quality of light filtering through the birch leaves added to the visual vibrancy.

A series of stepped fountains--specially designed and made--provided interesting developmentally-staged problems to be solved. Only taller children can reach the higher basins and faucets, but more interestingly, the operation of the faucets becomes increasingly more difficult as the child moves up the progression.





A good feature of the site is the lowered adult path around the periphery of the site so that parents can be on the same eye-level as their infants while informally observing or playing with them.

SATALITE AMERICANA- THE PRESCHOOL FOR EARLY LEARNING

(Formerly Community Learning Centers (C.L.C.)
Good Hope Road Center).

BASIC DATA

Client	Telephone Company employees
Address	2503 Good Hope Road S.E. Washington, D.C. 20020 (202) 581-1000
Director	Dorothy C. Bailey
Architect	Paul Curtis and Roger Smith
Consultant	Margaret Skutch
Date	1971
Users	50-100 pre-school children
Size	ca. 4000 sq. ft.
References	Educational Facilities Laboratories. <u>Found Spaces and Equipment for Children's Centers.</u> New York: Author, 1972. pp. 9, 30. <u>Architectural Record</u> , April 1972, 151, 140-141. A. P. Taylor & G. Vlastos. <u>School Zone.</u> New York: Van Nostrand Reinhold, 1975. p. 40.

PROGRAM DESCRIPTION

An old supermarket in a mixed neighborhood was converted into a pre-school facility for children of telephone company employees. The goal was to develop a developmentally oriented daycare center at (or near) work as a prototype for other "at work" daycare centers. The facility changed hands several times, and functioned for a while as a toy store, with most of the original renovation still intact. Currently the place is functioning as a commercial pre-school facility that emphasizes developmental day care.

FACILITY DESCRIPTION

CONCEPTUAL ORGANIZATION

The basically rectangular, one room (about 40 ft. x 100 ft.) space is divided by a continuous network of "space multipliers": elevated platforms, connecting bridges, storage spaces, nooks, and crannies.



INDIVIDUAL SPACES

The "space multipliers" both define space and allow for the sense of an overall room to remain. Visions blocked in some directions and open in others. Defined areas include reading, sand play, games, art, quiet areas, club and horse play.

ASSESSMENT

RENOVATION

This is an example of a relatively low-cost renovation of a simple, rectangular, one-room store. Most of the changes were achieved by interior wood structures.

Although the group makes regular field trips to parks and other areas, the lack of adequate outdoor play space is a serious deficiency.

SPATIAL ORGANIZATION

The subdividing walls, platforms, storage areas, etc. do a pretty good job of making the big room feel like a series of linked but separate spaces. This works especially well at the children's eye level. However, the sense of a large room is also there, especially because of noise, and the fact that the ceiling level isn't broken up. This is especially reinforced by the original linear lighting fixtures which run in three long rows parallel to the long walls.

A special interior feature is the large indoor sandbox and the large mural of a beach scene next to it on the wall. This seems to be an important feature for a school with no outdoor play space and maybe a possible prototype of major bad-weather play spaces for large new facilities.

LESSONS

The facility is a good demonstration of how through renovation to make a space that is much too large for children's developmental

activities usable and appropriate. Several changes would make the center much better.

- new task oriented lighting that emphasizes the areas (possibly the addition of a skylight to bring some natural light in)
- acoustical treatment of the overall room to reduce ambient noise levels
- development of an appropriate outdoor area

Scale

The most important lesson from the building is scale. The remodeling shows how a space, as large as the "middle room" at the new Bolling Air Force day care facility (see the Bolling case study above) may be at least partially repaired by interior landscaping treatment.

Level Changes/Space Multipliers

The other important lesson is level changes creating what we are calling a space-multiplier effect, as discussed above.

UNITED COMMUNITY DAY CARE CENTER

BASIC DATA

Client United Community Day Care Development Fund, Inc.

Address 613 New Lots Avenue
Brooklyn, New York
(212) 385-1201

Director Mrs. Hernandez

Architect Works/Robert Mangurian/New York

Date 1972

Users 180 school age children 6-12; 100 pre-schoolers
3-6; maximum total 280

Size c. 12,000 sq. ft.; c. 15,000 sq. ft. including basement

Cost c. \$1,000,000, including \$60,000 for land

References Per bambini learning center! Domus, Jualio
1975, No. 548, 36-39.

A commitment. Progressive Architecture,
November 1973, 59 (11), 105-109.

Citation. Progressive Architecture, January
1972, 53 (1), 94-95.

Build excitement into your school. American
School and University, December 1975, 48,
20-21.

Mangurian, R. A celebration of space.
Day Care and Early Education, November/December
1975, 14-16.

People
Interviewed Mrs. Hernandez

PROGRAM DESCRIPTION

The United Community Day Care Center is a preschool program and one of several services delivered by a community organization called United Community Day Care Development Fund, Inc.

The program emphasizes learning and development through group interaction and makes use of fieldtrips and special experiences as a major component. The teacher guides and directs the group interaction and makes teaching materials available only as appropriate.

Significantly, there are no "activity corners" or areas where "finely graded" materials are kept out and available for spontaneous use. The program was both the most rigorously presented and fundamentally the most different from any others visited. Although the director might disagree with the simplicity of the following analogy, the program seemed to be a mirror image of a "strict" Montessori school. Montessori programs emphasize individual discovery and learning through manipulation of finely graded and readily available teaching materials. Social skills are a part of the program, but the emphasis is on individual responsibilities rather than group interaction.

Learning and Development Through Group Interaction

While the group size is usually very small, activities are done in groups. Materials are not openly displayed and the teacher retrieves them for the class. The program emphasizes fieldtrips as a major activity and the center has its own bus.

The program includes an afterschool center. As part of that program, children are frequently out of the building. Cooking activities are important components as well as woodshop activities.

In general, the children have freedom to move about and to explore the building, go to the kitchen, etc.

FACILITY DESCRIPTION

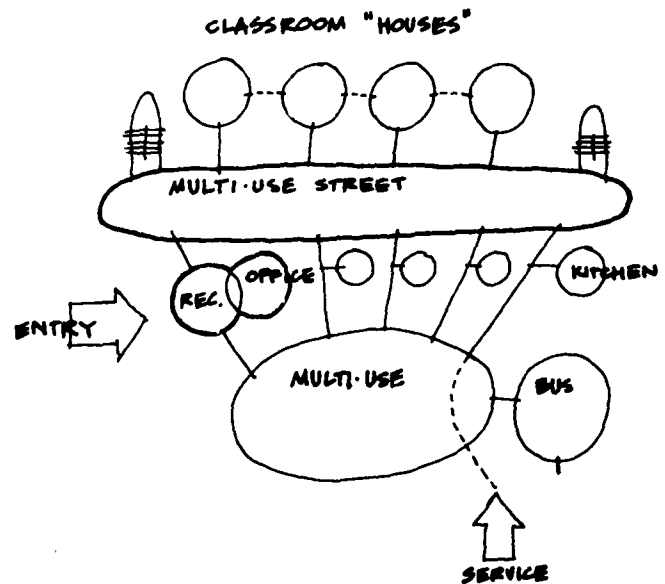
SITE

The site in a mixed-use area of Brooklyn reflects the community service and integration goals of the client. The site is very small and the outdoor play space for the center is on the roof. The street is a minor business street mixing stores, businesses, churches, and unused buildings. A major business-shopping street runs parallel to New Lots Road a few blocks to the north. As shown in the photo, this building and its neighbors are covered with New York's ubiquitous graphics. A school and its playground across the side street from the center occasionally get used as an extra play area.

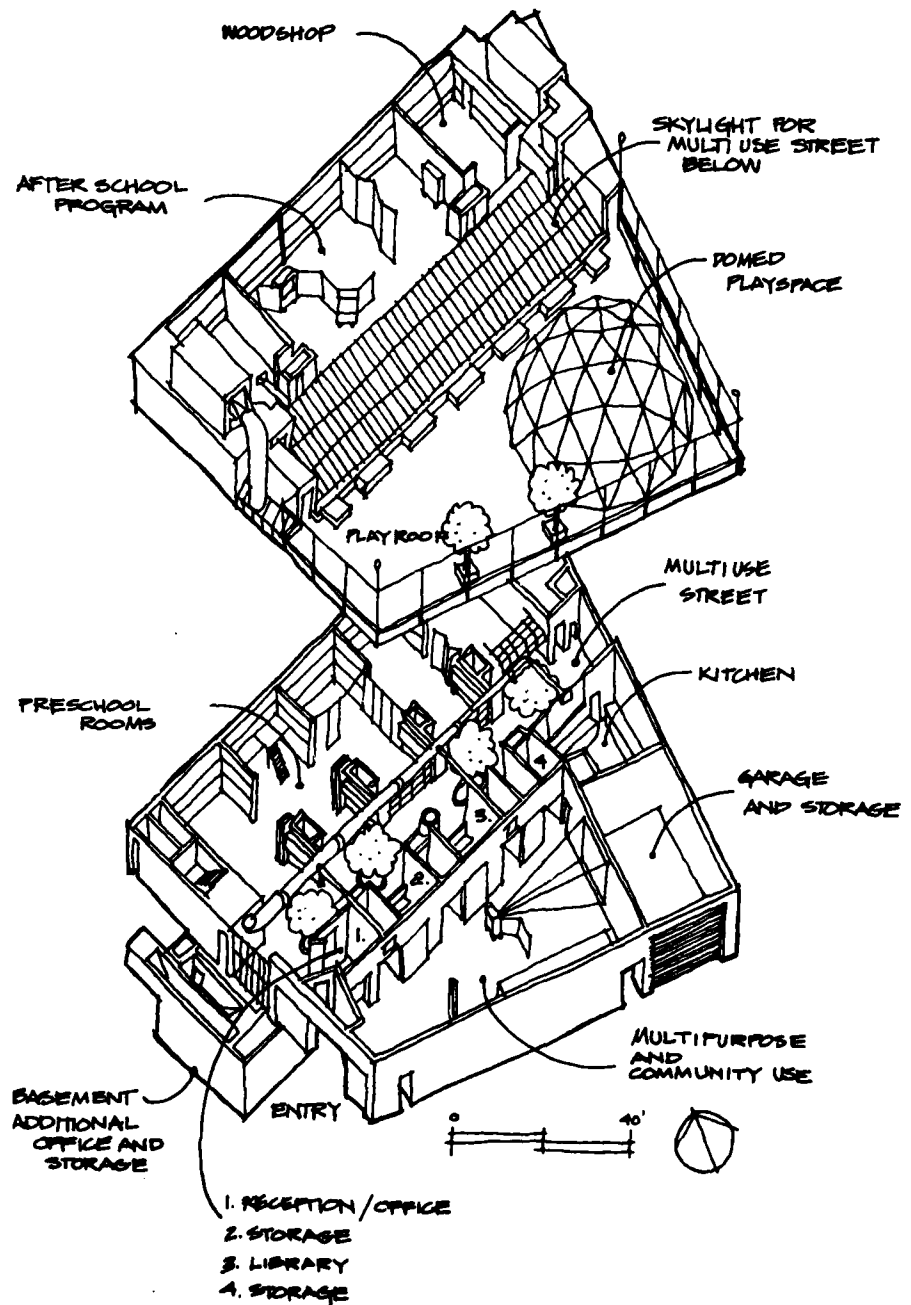


CONCEPTUAL ORGANIZATION

Because the building fills the small site this is basically a one-story building for the preschool (offices in a partial basement and afterschool space for older children in a small second story) with play space on the roof.



The dominant feature of the building is a sky-lit double-loaded corridor called "the street." The street provides views for otherwise windowless spaces, an image for the facility that contrasts with the outside environments, and multi-use space for classes, water play, bad-weather play, dining and other special projects.



INDIVIDUAL SPACES

- multi-use community room--a very important room in the facility even though the street is also a multi-use space
- garage--housing a bus that is an integral part of the program for the center
- special purpose spaces--the nurse's (sick room) office, the supplies room, the library, and the kitchen relate directly to the street through windows or doors to reinforce the street as the conceptual and architectural ordering device
- class rooms, called "houses"--have movable panels separating them to allow for major shared activities and special events, Christmas, etc.
- woodshop--included for planned use by the children

BUILDING SUBSYSTEMS AND FURNISHINGS

- mechanical and electrical--exposed, painted mechanical and electrical systems; central airconditioned forced air heat
- play area--the main feature of the roof is a geodesic dome which provides covered outdoor play space

ASSESSMENT

Entrance

- frequently 25 children at one time are in the entry; thus it should be bigger and there should be a "reception-waiting room" as big as a small classroom for waiting parents and children
- the small, covered entry area is a welcome transition in poor weather (but on an urban site it and the other recessed entries attract unwanted trash and uses)



Multipurpose Room

- used a lot by the children, but the staff would like to have a gym separated from the multipurpose room

Sky-Lit Street

- the best aspect of the building, both programatically (providing borrowed multi-use space), and architecturally is using the "street" to make a pleasant and sane focus in a harsh climate and neighborhood that is not "schoollike"; it is, however, a little narrow for its many uses.

Play Roof

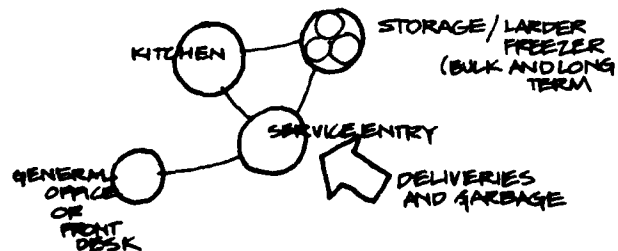
- not big enough to really work for boisterous outdoor play
- planter boxes are good but are too disruptive of play space.
- not designed to take the additional roof loads that future play equipment might require.
- the dome shelter doesn't function well; it is too hot, too small, too noisy, and its shape doesn't house functions well

Office Space

- not adequate in the original design, and thus added as an after-thought in a windowless basement

Kitchen

- too small, and the extra heat needs appropriate exhaust



- dishwashers should be counter height (not under) so the staff doesn't have to load and unload them, which can be critical when 200 meals are served a day
- freezers are important to programs buying food on sale

Folding, Flexible, and Movable Walls

- folding walls between classrooms are not frequently moved, and they tend to have installation, settling, and swelling problems

Storage

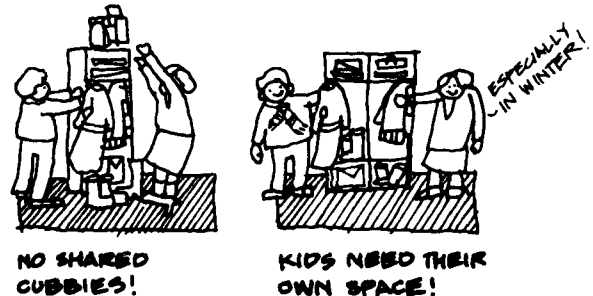
- not enough general basement-type storage to accommodate the stuff collected over the years

Display Space

- natural wood walls provide an excellent display surface

Cubbies

- two children can't share a cubbie and have winter clothes in them

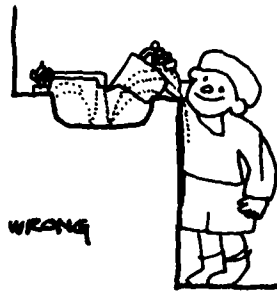


Energy Conservation

- some heat gain problems in the sky-lit street; the shades don't solve the problem but one or two panels of skylight that opened probably would

Mechanical Subsystem

- gives a nice atmosphere, especially as brightly painted (but collects dust and requires special cleaning and cost two



to three times more to repaint than the original painting)

Sinks

- rooms need multi-purpose sinks that are low, deep, don't splash, and have a spout children can get things under; stainless steel is best
- sinks are also needed in special program rooms like the "after-school" rooms

Acoustics

- some effort was made to make the walls the primary absorbing surface because the ceiling and the floors are hard; the wall surfaces are plywood with holes drilled so that the sound goes through the wall and gets dampened in the insulation and the space behind the wall; the holes are slightly too small to work as pegboard holes

Color

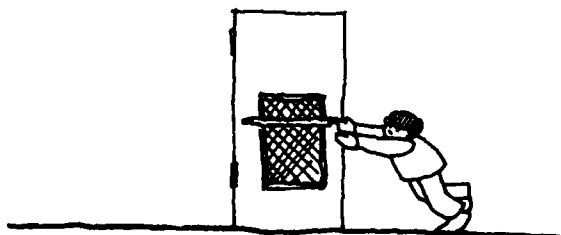
- bright colors are an important feature of this facility; color is a program issue not just an architectural issue

Floor Finishes

- the street has an applied elastic indoor-outdoor play surface which works fairly well except that it absorbs water and shows wear fairly quickly

Children's Door

- the location and shape of windows in doors allow children to see in and out of activity spaces



Overhead Doors

- overhead doors with glass are opened and closed to control privacy and noise, and work well

REVIEW

Architecturally this was the most inspiring facility on the East Coast trip, even though it had some serious planning errors like the lack of planned office and storage space and the difficult service arrangement of the kitchen. Still, the street concept, developed specifically for a tight urban lot, appears to be a very pleasant and flexible multi-purpose space and it is capable of handling general program activities, lunches, water play, bad-weather play, and functioning as a "borrowed" space for classroom activities when they need it. The street is analogous to the porches in size, shape, image of outdoors, flexibility, and usefulness found in other centers on urban and military sites.

INTERVIEW WITH SANFORD HIRSHEN

Sanford Hirshen is a Berkeley architect and faculty member of the University of California. In addition to the Big Sister League's Infant Care Center in Los Angeles, his firm has designed a much less expensive infant center, remodelled and recycling old centers, and designed a series of 30 day-care centers for migrant workers in the California valleys. He has also co-authored two reports on infant centers for the Child Welfare League of America.

Although we didn't discuss the Infant Care Center in detail, he did share some of his thoughts and recommendations about child care facilities in general.

CHILD CARE SYSTEMS

Sandy Hirshen favors the creation of child care systems. The philosophical issue, he says, is between home care and large group care.

Politicians often favor home care; it's cheaper, uses small groups, and replicates American values of the home and the nuclear family structure. The problem is that many care givers and small proprietors don't take it seriously; they don't get licenced, and the level of service is often not very good--it's only custodial, not developmental. Thus there are lots of questions as to how to monitor home care, and how to guard against people only offering minimal baby-sitting.

Mr. Hirshen suggested that many developmentalists and educators therefore favor group care. They acknowledge that poor families often don't have a very good family situation [certainly the case from our interviews on several military bases]. Having children in a big center for socialization, nutrition, early learning, and a whole range of supportive social services is really essential. But the rub is, he added, that it's not home. The surrogate

parent issue and the value of home-like settings is currently being strongly debated internationally.

"But we really need both, need the whole range, plus there are intermediates between home and large group care," Mr. Hirshen concluded. "Plus," he added, "we need techniques to induce home caregivers to come in and be educated, like the Far West Lab's toy lending library which induces people to come in, see what's happening, get new ideas, and so on."

His recommendation: Army bases as well as civilian communities need an integrated system of child care services and facilities, including home care, small centers, large group care, educational resource centers, and other services, or, in other words, he recommends conceptually seeing the issue not as one versus the other, but as a variety of options within a comprehensive coordinated system.

ARCHITECTURAL ISSUES

Mr. Hirshen suggested there is a range of architectural issues to be considered from master planning right through to furniture design. Many issues are different for infant and child care, though some are general to both. A sample:

Size

Most good large group centers he has seen are in the range of 50 to a maximum of 100 children. Over that number, the quality of developmental opportunities seems to drop, he said.

Spaces for Developmental Grouping and for Cross-Age Grouping

Mr. Hirshen recommends home rooms or home bases organized on developmental groupings (not necessarily age groupings) and free-mix areas which children can mix it up with

all ages (as examples see the Pacific Oaks and Big Sister Centers). Large centers especially require separate rooms and big free-mix areas--places to be alone with one's peers in developmental groupings and at other times in cross-age groups.

Houses Within Centers

Mr. Hirshen spent a number of years living on three different Army bases in the U.S. The whole syndrome of "Army brats" always being on the move concerns him deeply, and he wondered if there is any good social-psychological research on this, and what its impact should be on design. Intuitively he suggested the need for a "home" may be stronger for Army children than for others. (Not one person on a military base visited raised this issue.) To have a home base and an image of home as a somewhat stable entity may be most important during the formative preschool years. This suggests home care or at least neighborhood-based family day care centers, or, if not feasible, it may suggest he contended, a strong home group, a stable surrogate parent, and a "home" room in large group centers.

Quality of Staff Space

The quality of staff space and provisions of privacy for the staff may have a lot to do with the success of a center. Public programs are very underdesigned in this regard, he offered. A large portion of the success of child care centers, especially those without large personnel and operating budgets, has to do with morale and talent--with attracting talented staff and keeping them happy. The quality of staff space can directly effect this.

Nutrition and Food Preparation

Mr. Hirshen's recommendation here is that proper nutrition is very important, most kitchens are overly institutional and therefore that there should be two levels in food preparation: a major commercial kitchen, and sub-kitchens which take partially prepared food and make a meal. [The children's involvement in the second phase may be important to the development of good eating habits and understanding of foods, their sources, and nutrition.]

Flexibility

Sandy Hirshen may be the first person on this study tour to not immediately be enamoured with flexibility for child care centers. In assessing this view, we have to realize that he has been an innovator in flexible systems for a range of buildings. The issue, however, goes deeper than cost savings and ability to use a building for different functions at different hours, he maintains. It is a complex issue involving the advantages of community multiple use and yet children need the continuity of not always having their projects cleaned up.

Outdoor Play Areas

"Play design has gone sterile. Specialized companies are building this new wave log stuff, and it's everywhere. For example, the University of California Optometry Building's Children's Clinic has a piece of play structure in a special zone right outside the center and then there's a fence not 8 inches beyond the structure--an after-thought for children. Dropping a pre-fab out-of-the-catalogue play structure late in the design is like they're picking out a light fixture. It's so mindless. We went through a cycle of metal junk and then a good cycle of incorporating European ideas of adventure playgrounds and loosening things up, and now companies--it's so American--have taken all the good creative stuff out of it, and they're selling it."

Programming and Funding

Money is a crucial fact of life, he concluded the interview. Most centers are drastically under-funded. Good progressive programming [both educational and architectural] often reduces to simplistic things like maximizing interior space and keeping enough money aside to do a decent play space--not just planting grass and praying.

INTERVIEW WITH EMILY MACCORMACK

In addition to our discussion with Emily MacCormack regarding the National Child Research Center, she also offered a number of recommendations about child care centers in general.

Emily MacCormack is Director of the National Child Research Center and has been a consultant to and director of several other child care centers.

FACILITY RECOMMENDATIONS

Activity Spaces

"L" shaped rooms with "dead end" spaces are preferred. More complex rooms are easier to arrange because they reduce the "race way" effect, but too many make things difficult to manage.

A large motor activities area is especially important for use in winter and poor weather. In fact, a large center could easily use several multi-use spaces.

Playgrounds should be designed so that they are zoned by their design for "natural" age grouping, and so the little ones don't get bumped to the edges.

Cubbies--storage areas for children's coats and their valued personal belongings--should be associated with their specific room not generally located.

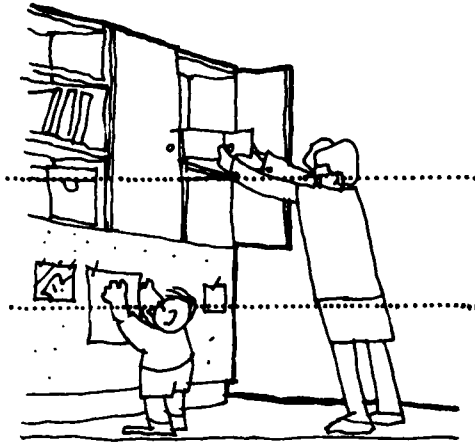
Preschool teachers need some kind of station or territory for themselves in their spaces.

Flexibility

Don't build in furniture; both children and adults should be able to move things and change room arrangements. Program activities require water in each room.

Lighting and Windows

She recommends indirect lighting over fluorescent (like Bolling Air Force Base). She suggests having as much window space as possible for both light and view. Windows should be high quality so when closed there is a minimum of infiltration.



Color, Display, Interior Finishes, Safety, and Security

Use color to reinforce possible space arrangements. Give teachers all the display space possible. Display space should be at children's eye level, level which provides a lot of space above it for other storage, color graphics, etc. She recommends dark floors, plain with no small patterns, for children to play games, puzzles, etc., on. Dark green is a good choice. Sharp corners on cabinets are at eye level for small children. Flammability of all certain rugs in classrooms should be checked.

Mechanical Systems

Radiant heating in the floor allows for increased floor use without carpets. Carpets can then be used to emphasize social areas. Wall-to-wall carpeting isn't adaptable or flexible enough for the variety of activities. She doesn't recommend air conditioning both for the initial cost and operating cost but individualized room heating control is very important for the comfort of the children.

Advice on water basins: don't make them too small--children need to fill and clean stuff. A "wash" or janitor's sink is preferred to make it possible to clean fish tanks, clay boards, etc. They should be low enough for the children to use.

Toys

Select toys that don't fail. The high-quality carpentered hollow blocks outlast everything else.

INTERVIEW WITH MARLENE SCAVO/BETSY DIFFENDAL

In addition to discussing the existing child care program and facilities at Fort Lewis, we also interviewed Marlene Scavo and Betsy Diffendal about some of their ideas on ideal child care facilities. The interview lasted about 2 hours. Marla Bush from DAAG Headquarters in Washington was present, and her suggestions are recorded elsewhere. Susan Bowlin was also involved. Her comments mainly pertained to Fort Lewis, and are recorded in that case study.

Marlene Scavo is the former Director of the Fort Lewis Child Care Center and presently heads a major HEW study of Army Child Care Programs and Facilities. Betsy Diffendal is an anthropologist and child care specialist at Evergreen State College who has had extensive experience reviewing child care programs, regulations, and facilities nationally, and is a consultant to the Fort Lewis Center and the HEW study.

CENTRALIZATION VS. DECENTRALIZATION

The interviewees favored centralized child care facilities basically for three reasons:

- centralized curricular development
- safety of not having programs in dangerous unconverted housing units
- assumed cost efficiency

They accepted that there were certain advantages to small size and scale, to neighborhood location, and to a home-like atmosphere, but felt that unless their concerns could be overcome, center-based child care made more sense for Army bases (see also the interview with Sanford Hirshen).

PRESCHOOLS VS. DAY CARE

No clear opinion was given as to whether preschools should or should not be integrated with child care facilities, though there was a slight leaning that academically-oriented preschools for 3 to 5 year olds might better be separated elsewhere on the base.

LOCATION

Child care centers, they said, should be located:

- near "downtown", close to major facilities and major streets, bus line, and on routes that parents use to go places
- near gate for off-base parents
- near natural areas, trees, and wooded areas
- near field-trip possibilities, e.g., library, medical center, fire station
- away from noise
- away from asphalt

BUILDING IMAGE

Both Marlene Scavo and Betsy Diffendal thought it very important that the building's image not be institutional or boxy, but rather that it should be soft in image, be small in scale, fit in with any quality architecture on the base, and, most of all, be recognizable by children as a world of and for children--a fun place to be.

SPECIFIC FACILITY DESIGN REQUIREMENTS

- possibilities for cross-age groupings should be provided
- private spaces should be easily accessible for children

- offices should be near reception, yet private
- the design should encourage parents to enter rooms, or to be able to see in without spying or disturbing activities
- children should be able to move freely among activities, yet should be able to be visible to staff
- access should be provided to outdoor play areas from all rooms
- provision should be made for indoor and outdoor large-muscle activity areas, including trikes
- food operations need to be centrally located
- children should be able to do cooking activities and to help with food preparation
- same place to accommodate and isolate a sick child must be present

PLAYGROUND LOCATION

Playgrounds associated with child care centers, they said, should be sheltered from rain, sun, and wind, secure from vandalism or pilferage, and accessible from all indoor child activity spaces.

SPECIFIC PLAYGROUND DESIGN REQUIREMENTS

- equipment should be provided with many developmental possibilities, including for individual play, social group cooperation, quiet play
- spaces should be provided for different developmental-aged children, with developmentally-appropriate equipment

BUILDING SUBSYSTEMS

A number of recommendations were offered regarding building subsystems, among them the following:

Electrical System

- lots of voltage for AV equipment, washers, institutional equipment, etc.
- recessed receptacles with tamper-proof slides
- indirect lighting with a dimmer in all infant spaces
- task lighting in many preschoolers spaces, especially reading or intense studying areas

Mechanical System

- individually controlled temperature for all rooms
- easy operating push-button water fountains, easy flush toilets; special equipment for special children
- faucets, etc. in activity areas (not toilet areas) may be developmentally challenging

Acoustics

- acoustic materials need to be highly absorbent, as with new rules on some bases, one can't rely on soft things being brought into the center

Natural Light and Views

- views very important, especially to outdoor play spaces
- lots of natural light
- natural light not necessary in nap rooms

- air should be fresh, and individually controllable

Modularity and Flexibility

- very important as believed to be cheaper for expansion

Interior Design, Color, and Graphics

- durability and washability is important of all surfaces
- colors should be interesting

Storage

- storage shouldn't look like storage
- storage needs include open storage for toys plus inventory, staff, and junk storage

Safety and Security

- people picking-up children must not be able to have access to children without passing a surveillance point
- safety glass or screen on all child-height windows

Display

- in addition to lots of child display space, need display space in an appropriate area for parents and for staff

INTERVIEW WITH COLONEL LARRY WANBERG

In addition to discussing the Oakland Army Base's Nursery with Colonel Wanberg, who is a consultant to that center, we also interviewed him about his notions for ideal early childhood development centers.

Colonel Wanberg is the Chief of the Department of Social Services at Letterman General Hospital in the Presidio, San Francisco. In addition, he is a regional consultant for child support service programs. He holds a Ph.D. in social planning, and is an expert in child care, having run centers and studied them in Scandinavia.

GOALS FOR EARLY CHILDHOOD DEVELOPMENT FACILITIES

Colonel Wanberg recommended eight principal goals for a good early childhood program and, by extension, for a good facility:

- active parental involvement, and spaces to reflect and encourage this
- integration with other parent- and child-oriented community service programs and facilities
- tied to career possibilities and to a Family Learning Center
- location of child care facilities--and play areas--in neighborhoods and where people work
- outdoor play areas thought of as outdoor classrooms, and thus to involve nature, water, textures, gardens, animals, sensory stimulation, and areas for exploration, self-discovery, dramatics, and group play

- relate program and facility to the natural environment--especially flora and fauna
- rich sensory stimulation everywhere
- indoor environment to have clear and not confusing spaces and learning centers, changes in levels, and use of the third dimension in a creative way

SPECIFIC SUGGESTIONS FOR BUILDING SUBSYSTEMS, ELEMENTS, AND FURNISHINGS

Electrical Systems

- wiring for center-wide sound and PA system
- wiring circuits in playgrounds for water pumps, extensive mechanical experiments, etc.
- variety of lighting, including different colors indoors
- task lighting
- track lighting
- all electrical wiring and outlets out of reach of children

Mechanical Systems

- toilets available to outdoor areas
- changing rooms not tied into toilet rooms
- child-sized commodes

Acoustics

- control noise reverberation
- soundproofing for staff area

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COMMUNITY DESIGN CENTER INC MILWAUKEE WI
CASE STUDIES OF CHILD PLAY AREAS AND CHILD SUPPORT FACILITIES.(U)
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Groupings

- family sized groupings in space

Views and Natural Light

- child eye-level windows to interesting, panoramic views
- natural light everywhere
- windows especially to playgrounds
- skylights

Modularity

- modular design and construction to allow program flexibility
- add-on modular units for 40-60 children

Partitions

- some walls without windows or other interruptions for display space
- an underground room
- some self-standing, movable walls, and some floor-to-ceiling moveable storage units
- other counters and storage maximum 36" for viewing over

Play Yards

- some outdoor covered play
- playgrounds which can change with the season
- easy access to play yards

Furniture

- boxed cubbies with recessed hooks
- raised play houses so child and adult can be on some eye-level

Parents and Special Cases

- easy access for parents
- transition space or room for first 3-5 days of a new child's exposure to center
- a quiet, calm isolation room for battered children

CONCLUSIONS: CHILD SUPPORT FACILITIES

CONCLUSIONS

While the criteria for Child Support Facilities for Army bases will be developed more fully in the Criteria Document, several recommendations and conclusions can be drawn based on the site inspections. This section of the travel report attempts to identify some of the most significant patterns and lessons learned on the inspection trip. Each issue is introduced by a title or topic statement followed by a review of observations and facts that lead to a conclusion or recommendation.

PROGRAMS OFFERED

MILITARY SITES

All seven military sites visited had programs for:

- infant care
- full-day child care
- drop-in care

DEVELOPMENTAL SERVICES

Five of the seven bases visited were clearly pursuing developmentally-oriented programs, and the two others clearly had short-range goals to move in that direction.

AFTER-SCHOOL EXTENDED-DAY PROGRAM

All but Oakland Army Base offer after-school care, but few older children use either the Alameda Naval Air Station or Ft. Bragg Nursery Village after school because they "have better things to do elsewhere." At Alameda the older children sometimes go to the youth recreation building. Only the Ft. Meade Army Base Child Care Center has a special space and program

for after-school children--it is the only activity on the second floor of the center. The children participating in its program affectionately refer to it as the "den."

FORMAL PRESCHOOL PROGRAMS

Only three of the bases have formal pre-school programs: Ft. Bragg, Ft. Lewis and Ft. Meade. Of these two are in separate locations and only Ft. Bragg has a formal academically oriented preschool at the Nursery.

Fort Bragg was very happy with this integration, while the other two realized it was inefficient to bus children across the base from preschool to after-school day care.

FULL-DAY AND DROP-IN OCCASIONAL PROGRAMS

Only one base, Ft. Meade Child Care Center has separate spaces and staff for full-day versus drop-in occasional care. But where opinions were expressed, the other directors consistently felt that the demands of part-day drop-in children were different from and took their staff away from working more attentively with full day children. Thus they would very much prefer separate programs, staff, spaces and entries.

PROGRAMS FOR THE HANDICAPPED

Two bases have special programs for severely handicapped children; the one at Ft. Meade is especially successful and along with the general location of Ft. Meade influences some personnel with physically or mentally handicapped children to request assignment there. Several bases recognized the material problems of children of single-parent families or virtual single-parent families in the case of Navy seamen, but no one yet had a specific program for emotionally disturbed or abused children.

PARENT EDUCATION PROGRAM

One west coast base, Alameda Naval Air Station, has an informal parent education program and at Ft. Lewis people spoke of beginning one in the near future.

CIVILIAN SITES

The pattern at the fourteen civilian child care facilities studied is for the most part very similar to military bases. Almost all centers offer developmentally-oriented programs for full- and part-day children. Most, however, do not offer infant care, and the most specialized facilities, like the Harold E. Jones Child Study Center in Berkeley, do not provide after-school care, though several inner-city centers do, like the United Community Day Care Center in Brooklyn. There are some highly specialized programs for severely handicapped children, like that associated with the Jessie Stanton Developmental Playground in New York, but most centers integrate children with minor disabilities into their regular program.

The caliber of developmental programs is very high at most centers visited and very few make any distinction between child "care" and preschool activities. Only the Pacific Oaks College Children's School had a separate preschool program and it is integrated with other early childhood programs by being part of a village or campus similar to Ft. Bragg's Nursery Village.

All the programs at Pacific Oaks are very developmentally-oriented and are based on a child-centered philosophy. The preschool program is more a distinction of age and that the children are only present for a part-day, than it is one of different types of programs. Other places did not even make a distinction between "preschool" and "scheduled part-day developmentally-oriented child care."

No civilian center made a sharp programmatic distinction between full-day and drop-in care. Most centers do not have the same legal or community-oriented commitment to

drop-in short term babysitting service that military centers have, and additionally most of the programs were full and had waiting lists for scheduled child care.

The Big Sister League Colleague Infant Care Center is a prototype program for infants, and especially for infants from single-parent, low-income, or potentially abusive families. It and several other centers also have parent-education programs, counseling and referral services.

CONCLUSIONS

- Where a child care program is quality care and developmentally-oriented the distinction between "care" and "preschool" blurs and the character of the program becomes one of philosophy of child development and the role of adult intervention, e.g., child-oriented or adult prestructured.

RECOMMENDATIONS

- Comprehensive child care programs should have as their core, infant care, full-day child care, part-day scheduled child care, occasional drop-in care and opportunities for physically and mentally handicapped children. They also should investigate special parent education programs, clinical intervention for families of abused children, and other out-reach programs.
- Full-day child care and occasional drop-in care should be differentiated in terms of programs, staff, and (possibly) entries.
- Where several different programs are offered for early childhood development, they can benefit from proximity in a village or campus arrangement. The "campus" might include a formal preschool program.

ISSUES FOR DECISION

As the needs of school-age children and pre-adolescents differ greatly from those of preschoolers, and as they tend to have

"better things to do" than hang around a day care center, a decision should be made whether it is better to provide a conceptually and physically separate section of the building for them, or to integrate their areas into youth recreation centers.

DEMAND

MILITARY SITES

Few child care directors or base master planners were willing to offer a firm estimate about total demand for child care on their base, except to say, even at the larger centers, "We have only scratched the surface."

The Air Force definitive plan for child care centers carries a provocative rate:

Authorized Area	Child Population
4,500 sq. ft.	500-1000
7,140	100-1600
10,500	1601-2500
12,500	2501 and above

Based on these standards, the Comanche II housing area at Fort Hood with 1000 units and an average 1.8 children per house (based on figures given by the base master planner) and a total of 1800 children, would qualify for a 10,500 sq. ft. center handling about 140 children capacity (@75 gross sq. ft./child). Thus, if the standards of the Air Force definitive plan were to be in lieu of a quantitative study of Army demand, and if they were applied to Ft. Hood (5000 family housing units on base) the base would need 5 or more centers handling an estimated total demand of 700 children/day.

It was subjectively suggested by several of the child care directors we talked to that if a new facility or facilities were sized to meet demand they might have to be very large (350-600 children, and even possibly 900 children on the larger bases). The estimates of both the directors

and the Air Force definitive dramatically differ from the facilities currently being planned (Ft. Bragg and Ft. Hood). Even after the new facilities are constructed each based will only be able to handle about 300 children.

Interestingly, although no one at Ft. Lewis made any guesses about ultimate demand, the base is comparable in size to Ft. Hood and it already has an average of 700 children

These estimates of demand do not include children of military or civilian-base employed families living off base. The figures also do not include the fact that there is likely to be a very high demand for full-day care among young enlisted families earning very low wages where the second parent needs to hold a full time job just to make ends meet. It is also likely that demand would rise dramatically at centers meeting local and state qualifying requirements. If the center meets qualifications a soldier family can receive welfare funds to pay for day care, if the center does not qualify no funds are available. Apparently only 2 out of the 200 military centers even meet the military's own standards.

ISSUE FOR DECISION

- Demand for Army child care seems to be an unknown and to some extent unpredictable variable. A number of variables appear to affect demand: number of children on base, numbers of base personnel and civilian employee families, availability and convenience of service, cost, availability of state and federal welfare funds, program quality, and image of the program. Our site visits and research has simply helped identify the issue as one that needs more study. Some questions that should be answered include: How many eligible children are there on each base? What formula can be used to give a fair estimate of demand? What size and number of facilities should be built? How much demand will there be on the largest bases?

CAPACITIES OF SEVEN MILITARY CENTERS

	Capacity	Average at any one time
Alameda Naval Air Station	200	150
Bolling Air Force Base (new)	182	unk.
(existing)	120	n.a.
Fort Bragg Army Base	290	250
Fort Hood Army Base	269	n.a.
Fort Lewis Army Reserve	315	200
Fort Meade Army Base	172	85
Oakland Army Base	50	45

National Military Average^a

^aData courtesy of a doctoral dissertation in progress by Ms. Kathy Perry,
School of Education, University of Wisconsin-Milwaukee.

NUMBERS AND CHARACTERISTICS OF CHILDREN SERVED

MILITARY SITES

While all military centers serve the 2 to 5 or 6 year-old range, and most focus on this age range, two centers accept infants as young as three months and six of the seven centers have after school children as old as 12. Most centers serve a cross-section of children in terms of family economics, socio-cultural background, and rank (enlisted, NCO, and officer families). Understandably, there are slightly more children of young families in the lower enlisted and lower officer ranks. Three centers were 50-60% minority. One--Alameda--was mainly children of officer families due to cost, whereas another--Oakland--was once boycotted by officer families due to image.

The capacities of the various centers are shown in the accompanying chart.

Thus the smallest center visited is the Oakland Nursery at a capacity of 50 children, and the largest is the Fort Lewis Child Care Center at 315 overflow capacity. Fort Lewis also has by far the largest number of different children passing through in a typical day, (3000 per month or approximately 700 in an average day). This is largely due to their "no reservations" policy, being open in the evenings and on Sundays and holidays and their ability to expand or contract hourly due to efficient organization, and a very dedicated on-call staff.

CIVILIAN SITES

Most civilian centers visited served between 50 and 100 children, with only the Helen Owen Carey Child Development Center (200) in New York, and the Pacific Oaks College Children's School (200) being of the scale of the average military centers, and none was in the scale of Fort Lewis (315, 3000/month) or the two 300 child centers being planned for Ft. Hood and Ft. Bragg.

Smaller civilian daycare centers find that the first financial break-even point is around 50 children. More importantly, two well-recognized extensive national studies have found that the quality of child care services suffers when centers are larger than 60 children (Prescott & Jones, 1967; Abt Associates, 1971). In centers which served over 60 children, as compared to those enrolling 30-60, it has been found that there is more emphasis on rules and routine guidance, teacher control was 2-1/2 times higher, teacher manner was rated neutral or distant, children were denied opportunities for cross-age group play, there were less activities to do per child, children were less interested and less enthusiastically involved, and so on. The Abt Associates (1971) study also found that, although larger centers cost a little less per child for operating expenses, they seem to find it harder to provide quality care even when they maintain favorable staff-child ratios.

The authors of those two studies have, nevertheless, seen some good large centers, and we have subjectively judged the following large centers to be very good; Alameda, United Community, Ft. Bragg and Ft. Lewis. Nevertheless, the conclusion offered by Elizabeth Prescott is: "Although a large center is much more complex, it has great potential for providing an impersonal, regimented environment. A large center must be skillfully administered and it must have space which permits privacy and autonomy to children. A large center does not work automatically. It has to be planned around the needs of small children."

CONCLUSIONS

- Conventional wisdom gleaned from the two pre-design conferences attended suggests that each base might only be able to expect funding for one new center.
- National Research has shown that quality child care is harder to achieve in centers larger than sixty children.

- Many current military centers exceed these sizes and new ones planned for the near future exceed these recommended capacities.
- Two of the large centers judged to be very successful and to offer individualized, sensitive developmental stimulations to the children; the Ft. Bragg Nursery village and Elizabeth Prescott's own Pacific Oaks Children's School are planned on a village or campus concept with different programs housed in different buildings each with its own qualified staff and head teacher and with the overall direction being to establish authority and yet allow autonomy.

RECOMMENDATIONS

- Every effort should be made so that centers will appeal to a cross section of base personnel and especially those of low-income, single-parent, or absent parent.
- Where possible, centers should be planned for a capacity in the range of 60 children.
- Centers planned to serve significantly more than 60 children (e.g., over 100 children) should be administratively, conceptually, and architecturally subdivided into programs (60 children maximum) in a campus or village concept. Separate buildings in the village might include infant programs, scheduled part-day child care, full day care, drop in care, and an after school program.

REFERENCES

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WHO DOESN'T USE FACILITIES, AND WHY?

MILITARY SITES

There was no particular pattern to "who doesn't use the various military care facilities." There was, however, a very clear pattern of reasons offered by the directors as to why they thought some families didn't use the services.

The three most mentioned include:

- cost--too expensive for low-income families (4 of 7 bases)
- image of building--perceived as still being an old barracks, a fire trap, dilapidated, etc. (3 of 7 bases)
- quality of the program; only maintenance not developmental (2 of 7 bases)

CONCLUSION

- The main architectonic factor that influences why facilities are used or not used by certain groups, is their image (old barracks, fire traps, dilapidated, etc.). This is a major design issue for any program of renovation or adaptive reuse of existing structures and it may not be resolvable.

PROGRAM PHILOSOPHIES

MILITARY SITES

Of the five military centers that clearly offer developmental services, the program

philosophy of the two centers is child-initiated, one is teacher-and-child mutually controlled, one (Bolling Air Force Base) included a few hours each day of structured academic leaning, and one (Fort Bragg) had an integrated formal academically-oriented preschool program along with other less formal care programs.

No center follows a particular developmental theory; the names of Piaget, Montessori, Skinner, and the human potential movement were all mentioned. All the places are happily eclectic.

Four of seven centers use "interest" or "learning centers," which are places where children can go, and where specific materials are stored or set-up as to stimulate their use.

One center (Oakland) intentionally used field trips as part of its program, and another (Fort Lewis) said it would use more field trips if their facility were closer to interesting places.

Several centers encourage parents to observe their children and talk with the staff. One center (Alameda) has parent seminars and informal staff-parent meetings about things the staff wishes to discuss or suggest to the parents. Several other centers have plans to develop more outreach programs.

CIVILIAN SITES

A similar pattern emerges on civilian sites. All 32 offer developmental services, some being very sophisticated and led by head teachers with M.A.s and directors with Ph.D.s. None followed any single orthodoxy, though most seemed to be influenced more by Piaget, Montessori, and other interactionalists than by strict behaviorism or laissez-faire nativism. No center visited by the team followed either a strict, academic program or a behavior-modification program, nor did any just let the children "do their own thing". Most centers stressed child-initiated and spontaneous behavior

with staff members being sensitive facilitators, arrangers of "learning centers," and guides for development. All programs made efforts to encourage social, intellectual, and physical development--many emphasizing language and socialization skills, mathematics and exploratory discovery, creative expression, and large- and fine-motor development.

Two centers had especially clearly articulated philosophies--United Community Day Care Center on the East Coast and Pacific Oaks College Children's School on the West. The reader may wish to review their program philosophies.

CONCLUSION

- Most child care centers are eclectic in program and philosophy. They combine a number of programs and theories. Most include and emphasize child initiated activities, use of learning centers, staff-child interaction, and child-environment interaction.
- Parent involvement and parent education is a growing trend in child care centers. Child care centers that feel confident about their program for children may wish to begin a variety of outreach programs to further improve their programs.

AGE GROUPING/CROSS-AGE LEARNING

MILITARY SITES

At most of the military centers visited children were grouped as follows:

3 or 6 mo. - 2 or 2-1/2 yrs: infants
2 or 2-1/2 - 4 or 5 yrs.: young preschoolers
4 or 5 - 6 yrs.: older preschoolers
6 - 12 yrs.: after-school

Group sizes varied from 6 or 8 children in a group (with that group subdivided into 2 smaller groups of 3 or 4 children working together, e.g., the Alameda Naval Air Station Child Care Center) to some groups of 15 to 20 or more children together (observed several places.) For more discussion on this very critical issue, and the role of architecture in it, see Group Size.

The new Army Community Service regulations AR-608-1 suggest child-staff age ratios which make it easy to imagine age groupings of 6 wks.-18 mo.; 18 mo.-3 yrs.; 3-5 yrs.; and 5-12 yrs.

Our observations suggested that most military centers tend to keep children in fairly strict age groups in different rooms, sometimes even naming the rooms. Age group separation doesn't seem to be influenced by center size. Thus, Fort Lewis, for example, has five main rooms and five age groups:

Tiny Angels	3-14 mo.
Little People	14-23 mo.
Noah's Nook	23 mo.-3 yrs.
Sesame Street	3-4-1/2 yrs.
Happiness Pad	4-1/2-12 yrs.

And even Oakland, the smallest military center visited, had three main age group rooms:

Infants	3-13 mo.
Ambulatory Toddlers	13 mo.-2-1/2 yrs.
Preschoolers	2-1/2-5 or 8

In both of these cases, and most others, the age group rooms are quite separate from each other and cross-age groupings either don't occur, or occur only on playgrounds, and in central multi-purpose spaces. The socialization and learned benefits from age group mixing are not evident in the playgrounds because of the sparseness of equipment and playsettings.

CIVILIAN SITES

The pattern of age groupings at civilian centers was somewhat different. Infants and pre-stable ambulatory, pre-language toddlers are usually spatially somewhat separated from older children who might simply overrun the youngest children.

The centers judged to be the best programmatically, however, made few distinctions among preschoolers from 2 or 2-1/2 up to 6. Larger centers had a slight tendency to put children of different ages in different rooms.

Directors and staff interviewed preferred a separation between infants and older children but not isolation of age groups. Talking, walking preschoolers are models for infants who often understand their babbles before adults do. The older children can learn about roles, cooperation, and social responsibility through their spontaneous desire to be with and look after infants.

Directors and staff also clearly preferred a mixture of ages of children over 2. Children sometimes do want to be with their peers, but also have much to gain through cross-age groupings. Their view is consistent with recent research which supports the values of cross-age contacts in child care. Mixed age groups were also a feature of the best indoor care centers and outdoor play yards.

RECOMMENDATIONS

- Mixed age grouping benefits both the older and younger children. Care givers should allow mixed ages to play together.
- Play areas should not be strictly separated by age and children should not be separated and grouped simply because staff-child ratios are different for different age groups (AR-608-1, Para. 8-5. c (1).)

- Although unsupervised access of older children to toddlers and infants should be controlled, provision should be made for children of different ages to mix and play together in developmentally appropriate play areas.

ISSUE FOR DECISION

- The weight of evidence from our observations of children's behavior on military and civilian sites and from our interviews with child care directors and national experts strongly favors opportunities for both indoor and outdoor activities in cross-age groups. Recent research is consistent with this view. This evidence is in slight variation to the new Army Regulation AR608-1, see especially Paragraphs 8-20e and 8-23a. Reference is also made to a letter of July 3, 1978 on these issues from Mr. Gary T. Moore to Messrs. Bill Johnson and Murray Geyer, DAEN-MCE-A and DAEN-MCE-P, with copy to Ms. Marla Bush, DAAG-PSC, and follow-up letter to Ms. Bush on July 27, 1978.

IMPORTANCE OF THE CHILD CARE PLAY YARD

MILITARY

All the military child support facilities had outdoor play areas. Only Fort Meade and the existing facility at Bolling Air Force Base had adequate traditional equipment to handle the number of children at the facility. (Others like Fort Bragg came close.) Interestingly these two were also the only ones that had significant natural amenities like large shade trees and some slope to parts of their sites.

The new facility at Bolling with its zoned play areas, landscaping, fencing and timber equipment is clearly outstanding in comparison although it has yet to be actually used and lacks large shade trees.

CIVILIAN

By comparison only two of the eight civilian facilities visited on the East Coast had pleasant or even minimal outdoor program areas. The play areas on the roofs of the centers in Brooklyn were awful. Even in the more benevolent climate of California only three of the facilities visited had quality outdoor space. However the best use of outdoor space was in California at the Pacific Oaks College Children's School.

CONCLUSIONS

While outdoor activities are conceptually touted as an equal partner with indoor activities, the space programmed for them and the equipment provided for them is usually poor and an after-thought. While the problem of providing adequate outdoor areas is most critical in civilian and urban facilities, the problems of low aspirations and lack of ideas for developing and furnishing outdoor areas are a significant problem for each. Even the new well furnished outdoor area at Bolling doesn't hint at the possibilities of gardens, animals, or a "work yard" of loose building materials that also fascinate and contribute to the development of children.

RECOMMENDATIONS

- Outdoor play areas receive budget allocations that reflect their developmental and programmatic role in day care facilities.
- That outdoor play areas cannot be categorically omitted as a cost savings move.

ROOM SIZES IN NEW FACILITIES

MILITARY AND CIVILIAN

The single "new" military facility visited (Bolling Air Force Base) had four relatively

large rooms. The largest is about 60 x 60 and can be subdivided to make two rooms of 30 x 60. The remaining two rooms are about 30 x 50. While these are the sizes recommended in the Air Force Definitive, they are also about twice as big as those found in the new civilian facilities. In addition older military facilities (Fort Hood, Fort Meade, and Bolling-existing) were not inspiring environments. New and well published facilities that have large open rooms like the Early Learning Center in Stamford, Connecticut, are made up of small modules, under 200 sq. ft. each, that dramatically modulate and reduce the apparent size of the open space and benefit from being both open (flexibility) and enclosed (intimacy).

According to findings in a HUD Study (Ruopp, 1978) room size is a factor in the quality of day care programs with smaller rooms functioning best.

RECOMMENDATION

- Our recommendation is for small rooms of about 400 sq. ft. maximum.
- Larger spaces should be dramatically articulated with a combination of walls, transoms, ceiling height and floor level changes to define smaller spaces.

WELCOME MATTERS

CIVILIAN AND MILITARY

The quality of the entry space and the quality of the greeting given to children as they enter is very important in establishing the image and personality of the center. Several bases did a very good job (Fort Hood, Fort Bragg, Alameda Naval Air Station.) Eye level contact and a greeting by name between the child and the receiving attendant was a feature of Fort Hood and Fort Bragg.

It is also advisable to have the director very available. This is important to both children and parents. In fact most of the directors, both civilian and military, know all the children by name. The

All four of the large public day care facilities visited in Brooklyn had some kind of space, usually a hallway widened designated as a potential play space.

- Daughters of African Descent - "hallway room"
- Helen Owen Carey - enlarged lobby and room sized hallways
- New Life - widened hallway
- Block School - Special Room

RECOMMENDATION

- We recommend that an indoor play yard that gets multiple-use with one or more other activities be included as a designated activity space in child support facilities.

PORCHES ARE MULTI-USE SPACES

MILITARY

Several military facilities had porches, arcades, or covered outdoor play areas that were used and appreciated.

- Fort Bragg - screened porches
- Fort Hood - covered outdoor sand box
- Bolling Air Force Base - entry porch

The overhang at the new Bolling facility almost creates a usable porch for the care rooms but needs to be 4-5 ft. wider.

CIVILIAN

Several civilian facilities also had porches, arcades, or covered outdoor play areas that were used and appreciated.

- National Child Research Center - porch and entry porch

- Federal Employees - arcade
- Pacific Oaks Children's School - porch
- Harold E. Jones - covered outdoor play
- Bing Nursery School - porches

CONCLUSIONS

Porches, arcades, and covered outdoor play areas are highly prized and highly used features of buildings. They provide a tremendous amount of flexibility and area at reasonable cost. Porches are multi-use spaces.

RECOMMENDATIONS

- We recommend that play porches, arcades, or covered outdoor play areas be included in all schematic designs and be included as a required program space for child support facilities.

INFANT CARE

MILITARY

Three observations about infant care in the military deserve mentioning:

- The recommended ratio in the Army is 1:5. HUD and typical State Requirements of 1:3 are consistent with expert opinion as the ratio necessary for quality care.
- There is a tremendous interest on the part of day care directors to develop and improve infant stimulation programs (Fort Meade, Fort Hood).
- There is more demand for infant care relative to supply than for care for older children. Just how much demand is unclear.

CIVILIAN

Infant care is relatively expensive and more frequent in military than civilian settings, and the Big Sisters facility is too expensive to be used as a prototype. An infant care facility should be buildable that costs less than \$20,000 per infant.

CONCLUSIONS

- too many infants is more apparent than too many toddlers
- no one would try to raise triplets or quadruplets without a lot of help yet triplets and a single mother is a child staff ratio of 3:1

KITCHENS

MILITARY AND CIVILIAN

The new facility at Bolling has a very large well equipped institutional kitchen. While the team's immediate reaction was that it was much too large for a day care center, visits to other facilities, both civilian and military, convinced the team of the necessity of a full institutional kitchen for programs providing full day care. When children are at the center 6 a.m. and aren't picked up until 6 in the evening the center becomes responsible for more than serving them their bag lunches.

Kitchens pose problems in planning a facility. While institutional kitchens are dangerous places and a child can easily be hurt there, kitchen activities, cutting, washing, cooking, cleaning, etc., are important developmental activities and a program that doesn't include them is missing a major and rich resource to the program. Unfortunately the new Army regulations don't allow children in the kitchen.

CIVILIAN

Civilian settings produced several examples where the kitchen was at least tangentially a part of the centers activities.

- Pacific Oaks - a kitchen in minimally remodeled house
- Federal Employees - open kitchen area with a counter all around, but children aren't allowed inside
- Northridge - two kitchens: one institutional and a "home" one
- Big Sisters - two kitchens: an institutional and a "home" one

RECOMMENDATIONS

- Plan for a large well equipped institutional kitchen in all day care facilities.
- Plan for kitchen and cooking activities by small children as a programmed activity of each center separate from the institutional kitchen.
- Allow children in the institutional kitchen for visits.

INTERIOR DESIGN (COLOR)

MILITARY

Two of seven bases had made a significant effort to improve the image of their facility through the use of color.

- Fort Bragg - includes murals
- Fort Meade - exterior on both the nursery and the pre-school

Fort Hood had also recently repainted its facility but had not used color. The new Bolling facility has some "supergraphics" mural work and uses color on accent walls.

Several directors identified color and lack of a "fixed-up" image as contributing to why some people didn't use the facility.

CIVILIAN

Color was a major aspect of three of four remodeled civilian day care centers.

- Satalite Americana - murals and furnishings
- Block School - walls and floors
- Federal Employees - walls, floors, furnishings

Of the three new care centers visited in Brooklyn two had used color in a "cheery" way.

- H. O. Carey
- United Community

The others have tan or navy gray and burnt brown-maroon brick as their color scheme. These colors have proved durable but dull.

RECOMMENDATIONS/CONCLUSIONS

- Color and decorations of facilities is an important feature valued by both parents and children.
- In new facilities the first repainting generates a problem because the institution doing the repainting usually doesn't have available the colors specified in the original contract and always seem to choose ugly dull substitutes.

ACOUSTICS

MILITARY

The acoustics at several military facilities deserve special note. Unfortunately they deserve note because they are so bad, the spaces multiply noise and even echo.

- Fort Hood
- Fort Meade
- Bolling (old)
- Bolling (new predicted)

The problem is basically having too large rooms with lots of hard surfaces. Children get "wound up" because of noise until the whole place is in a frenzy.

CONCLUSIONS

The advantages of flexibility, changeability and the feeling and openness gained by having large spaces can easily be nullified if the spaces are built out of hard materials, and a room reflects and reinforces the sound. Since the results can be disastrous, the decoration of the classroom and design proposal must be analyzed for performance as appropriate acoustical environments.

SECURITY

Two types of security need to be discussed when talking about day care facilities, physical security and children's security.

Physical Security

Only two of the seven military facilities mentioned problems with vandalism, theft and robbery. One facility had actually been robbed. Physical security is much more of an issue at the civilian facilities located in urban areas. Doors are locked and are only opened by a buzzer system after the visitor is identified. One center had recently been broken into and vandalized.

Childrens Security

Directors of a majority of the military bases expressed concern about a child being picked up by the child's "wrong parent" as a way for someone to get child

custody in a divorce. Fort Bragg, Fort Hood, Fort Lewis and Alameda Naval Air Station had especially well organized drop-off and pick-up procedures that help control the problem. The smaller civilian settings rely more on personal recognition.

CONCLUSIONS

Security is a real problem at day care centers. The architectural implications include furnishing the center with secure lockable doors and windows and providing enough space to handle the checking in and checking out of children.

MODULARITY

CONCLUSION

Although there was some repetition of room size in some of the facilities visited and there was some regularity in the quickly built "temporary" buildings that house most military day care centers, none of the facilities, civilian or private could be used as an example of a facility designed around a clear architectural module.

REMODELING

MILITARY

All the military bases visited by the teams had remodeled facilities. The buildings had a variety of previous uses:

- Fort Hood - classroom
- Fort Bragg - hospital
- Fort Meade - N.C.O. Club
- Bolling Air Force Base (old) - housing
- Fort Lewis - recreation building and other uses
- Alameda - community service building and other uses

- Oakland - offices

Five of the facilities were single story structures. Of the two exceptions one didn't use the upper floor at all (Fort Lewis) and the other consisted of one room (Fort Meade) used as the "club" room for the after- and before-school children.

CIVILIAN

Four of the eight civilian facilities listed by the East Coast team were remodelings. The buildings had a variety of previous uses.

- Satalite Americana - grocery store
- National Child Research Center - Victorian house
- Federal Empolyees - office space
- Block School - grocery store, synagog

All three of the remodeled facilities were single story. (The federal employees facility was in the basement of a multi-story building but opened onto a court with access to the street and only the National Activity used upper floors for child care.)

CONCLUSIONS

- A variety of building types have been remodeled into child care centers.
- The smaller the program the easier the match.
- Remodeled facilities are almost always single story.

USE OF SPACE IN REMODELED DAY CARE FACILITIES

MILITARY

Large open spaces without much articulation or differientation were found in three of the seven remodeled military facilities.

- Fort Hood - left open
- Bolling (old) - low partitions
- Fort Meade - low and high partial walls

CIVILIAN

Large open spaces were found in three of the four remodeled facilities visited by the East Coast team.

- Satalite Americana
- Block School
- Federal Employees

All three had dramatic multi-level interiors landscaped with platforms, partial walls and steps, and storage.

RECOMMENDATIONS

- Large open spaces while appearing to be flexible can be more difficult to utilize than smaller broken up spaces. Noise, lighting, and group over stimulation become critical problems.
- Efforts to "landscape" large open interior spaces with dramatic articulated multi-level platforms, niches and sculptural walls have been fairly successful and should be considered a major part of remodeling facilities with large open spaces.

REMODELING COSTS

CIVILIAN

Remodeling costs for civilian centers vary. The following costs include dramatic multi-level interior partitioning.

- Block School *\$15/sq. ft.
- Federal Employees *\$18/sq. ft.

*Caution: these costs are almost 10 years old.

RECOMMENDATIONS

- Don't automatically assume remodeling is cheaper.
- Remodeling costs to get effective and functional space for day care centers can be fairly expensive, especially if kitchens and a lot of plumbing, electrical, or insulation is involved.

APPENDIX--RESEARCH FORMS

Copies of the research instruments--observation and interview forms--are available for \$3.00 prepaid by writing Publications in Architecture and Urban Planning (address inside front cover).



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SUPPLEMENTARY

INFORMATION

PROGRAM DESCRIPTION

The Infant Care Center is a newly designed addition to a Pacific Oaks College classroom building (see History in Pacific Oaks College Children's School above). The infant program centers around physical and social stimulation provided by staff and by the built and natural environments.

FACILITY DESCRIPTION

SITE

Sited in a grove of birch trees behind an existing Greene and Greene building and using two renovated rooms, the Infant Care Center is small and intimate, built entirely of native California materials, and has a 3:1 ratio of outdoor to indoor space.

CONCEPTUAL ORGANIZATION

A strict motor developmental progression provides the underlying rationale for the organization of the outdoor area. The progression starts from the grass at the northeast corner (see plan) and moves westward across the site over slightly-elevated wood stumps to a sand area, up a textured crawling ramp, down a wide slide or up a wooden set of stairs to a platform, around, and down again to sand, and finally across an expanse to a concrete step, deck, and basins adjacent to the building. The youngest infants, e.g., the 6 week to 6 months children, are placed on the grass shaded from the southwest by the birch trees. As they master crawling, and crawling over the slight rises of the stumps, they will be able to move to the sand, and this development roughly coincides with when infants stop putting absolutely everything in their mouths, including potentially dangerous sand. Similarly, there is no way for the infant to get to the steep wooden stairs or even the slide until having mastered waddling up a textured ramp. A concrete step, dangerous for young infants because of potential spills, similarly cannot be reached until fairly large wooden risers which stand in its way, are mastered.

availability of the director to intervene and resolve small problems about money, counseling times, etc. is an important service provided to parents as they pick up and drop off children. Frequent brief encounters set up a social relationship that makes it easier to handle bigger problems (Fort Bragg).

RECOMMENDATION

- An entry desk in a day care center should be both child- and parent-oriented and should probably have the receiving attendant at eye level contact with the child.
- A padded edge for the child to lean on is nice and if possible the child should be greeted first and by name.
- The director's office and the director should be visible through the open door.

INDOOR PLAY YARD

MILITARY

Several directors mentioned the desirability of having a place capable of being used for indoor play during bad weather when it is too hot or too cold. Fort Lewis and Fort Mead have gym spaces. At the pre-design conference at Ft. Hood and Fort Bragg the directors recommended an indoor gym. The existing gym at Fort Meade is highly used and programmed use has to be scheduled throughout the day even on days when the children go "out" to play.

CIVILIAN

The civilian directors were just as enthusiastic about indoor play yards. Those that have them include United Community and National Child Research, Big Sisters League, and Northridge Childrens Center.